MM DD, 2015

Mr. Todd Douthit
Manufacturing Manager
PPG Industries Fiber Glass Products, Inc.
940 Washburn Switch Road
Shelby, NC 28150

Dear Mr. Douthit:

SUBJECT: Air Quality Permit No. 01958T62
Facility ID: 2300153
PPG Industries Fiber Glass Products, Inc.
Shelby, North Carolina
Cleveland County
Fee Class: Title V
PSD Status: Major

In accordance with your completed Air Quality Permit Renewal Application received January 06, 2009, we are forwarding herewith Air Quality Permit No. 01958T62 to PPG Industries Fiber Glass Products, Inc., Shelby, Cleveland County, North Carolina authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 2Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a

request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

This Air Quality Permit shall be effective from MM DD, YYYY until MM DD YYYY, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact Mr. Joseph Voelker, P.E. at (919) 707-8730.

Sincerely yours,

William D. Willets, P.E., Chief, Permitting Section,
Division of Air Quality, NCDEQ

Enclosure

c: Heather Ceron EPA Region 4
Mooresville Regional Office
Central Files

ATTACHMENT to cover letter to Air Quality Permit Number 01958T62

Table of Changes to Permit No 01958T61

Condition No. Existing	Condition No. New	Changes*
Cover letter	Same	• Revised dates, permit numbers, etc.
Insignificant Activities List	Same	• Removed and modified numerous sources at the request of the Permittee
Permit, page 1	Same	• Revised dates, permit numbers, etc.
Equipment List	Same	• Using Furnace No. 526 as a model since it was the furnace most recently modified, revised the equipment descriptors of furnaces 520, 524 and 525 to be consistent with Furnace No. 526. No changes in permitted capacity or fuels were made. • Removed all minor modification and 502(b)(10) change footnotes. Once the renewal is issued the minor modifications referenced in these footnotes will be covered by the permit shield pursuant to 15A NCAC 2Q .0512. • Reordered equipment to facilitate readability • Added heat input values to equipment descriptors for drying ovens addressed in Section 2.1.Q based on application no. 10B • Removed the small boiler (ESB83C) • Removed sources address in Section 2.1.P • Removed sources addressed in Section 2.1.T • Removed sources addressed in Section 2.1.U • Removed reference to No.2 fuel oil –firing on furnaces 520, 525 and 526 •
Global	Same	▪ Removed reference to specific equipment ID numbers in various permit conditions when it was clear and unambiguous by context which equipment was being addressed. ▪ Revised references to Section 2.2. conditions as necessary to account for the removal of the existing condition 2.2.A.
Global	Same	▪ In all "standard" testing conditions, the language was simplified to read: **<u>Testing</u>** [15A NCAC 2Q .0508(f)] X. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section XYZ above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .XYZ. General Condition JJ addresses all the testing requirements pursuant to 15A NCAC 2D .2600.
Global	Same	▪ In context of particulate matter (PM/PM10/PM2.5) removed any mention of "filterable and condensable" for permit clarity and consistency. In general, (with a few exceptions, .e.g. NSPS Subpart CC), particulate matter consists of both the filterable and condensable fraction. When there is an exception to this, mention will be made to "filterable only" or "condensable only"
2.1.C.		**Furnace No. 520**
		• Revised equipment descriptor to be consistent with permitted equipment list
2.1.C Applicable regulations table		• Removed reference to PSD avoidance limit for fluorides • Added reference to the state enforceable only fluoride emission limitations required pursuant to the SOC 2002-002.
2.1.C.1	Same	• Substantially revised the 2D .0515 permit condition to read substantially the same as the 2D .0515 condition for Furnace no. 526. The rationale is explained in the permit review document. Changes include:

		• Inclusion of an annual or 5-year testing requirement depending on margin of compliance. • Removal of the process rate multiplier of 0.776.
2.1.C.3	Same	2D .0521 condition
a.	Same	• Removed the following language as it does not apply: *melter while operating in accordance with 40 CFR 60.292*
b.	Same	• Revised regulatory reference • Removed reference to 2D .2601. The reference to General Condition JJ is sufficient.
c.	Same	• Removed "establish normal by January 10, 2005". The Permittee has met this requirement.
d.	NA	• Removed COMS requirement for melter operating scenario as it does not apply
e.	d.	• Simple renumbering
f.	e.	• Simple renumbering
2.1.C.4	Same	2D .05030 PSD Condition • A regulatory reference to 15A NCAQC 2Q .0317 Avoidance Conditions was added to clarify that these limits are to avoid triggering PSD.
a.	Same	• Removed reference to fluoride limitation
c	same	• Added monthly recordkeeping requirements
NA	d	• Added semi-annual reporting requirements
NA	5	• A NSPS Subpart CC condition specifically for 520 was added to the permit. The requirements were previously located in Section 2.2.
NA	6	• Added a 2D .0521 condition to address the melter only. The melter has unique requirements under this rule (see 2D .0521(g)) that were not explicit in the existing 2D .0521 condition.
2.1.D.	**Same**	**Furnace 524**
		• Revised equipment descriptor to be consistent with permitted equipment list
Applicable regulations table		• Removed reference to PSD avoidance limit for fluorides • Added reference to the state enforceable only fluoride emission limitations required pursuant to the SOC 2002-002. •
1	Same	• Substantially revised the 2D .0515 permit condition to read substantially the same as the 2D .0515 condition for Furnace no. 526. The rationale is explained in the permit review document. Changes include: • Removal of the existing testing condition c. as a result of the modifications in application No. 11D. This testing requirement was satisfied on August 23, 2012. • Removal of the process rate multiplier of 0.776.
3	Same	• Revised the 2D .0521 condition to just address the refiner and forehearth. The applicability of 2D .0521 to the melter will be addressed in a separate condition. No substantive changes to requirements for the refiner and forehearth were made.
NA	4	• Added a 2D .0521 condition to address the melter only. The melter has unique requirements under this rule (see 2D .0521(g)) that were not explicit in the existing 2D .0521 condition.
4	5	2D .0530 condition
		Added regulatory reference of 2Q .0317 as it is a PSD avoidance condition
a	Same	• Removed reference to fluoride limitation
c. through f.	c.	• Simplified monitoring and recordkeeping requirements by removing redundant language.
g.	d.	• Simple renumbering • Reduce reporting from quarterly to semiannually. The emissions must now be calculated for each of the 12-month periods over the previous 17 months instead of the previous 14 months.
5.	NA	• The PM.2.5 testing requirement has been removed. The stack testing was

		completed August 23, 2012. The stack test results were approved by the SSCB on January 15, 2013. The PM2.5 emissions from the stack test were lower than the emission factor used in the Air Permit application 2300153.11D
NA	6	• An NSPS Subpart CC condition specifically for 524 was added to the permit. The requirements were previously located in Section 2.2.
2.1.E.	**Same**	**Furnace 525**
Permitted source(s) description	same	• Using furnace no. 526 as a model since it was the furnace most recently modified, revised the equipment descriptors of furnace no. 525 to be consistent with Furnace No. 526. No changes in permitted capacity were made. The permitted ability to fire No.2 fuel oil was removed. The descriptors are consistent with the permitted equipment list.
Applicable regulations table	same	• Added reference to the state enforceable only fluoride and filterable PM emission limitations required pursuant to the SOC 2002-002. • Removed reference to PSD avoidance limit for fluorides
1.	Same	2D .0515 condition
a.	Same	• Removed the following sentence: *For the purpose of compliance with 15A NCAC 2D .0515, the process rate is the pull rate divided by 0.776.*
c.	Same	• Revised the testing condition to be independent of the other furnaces. Testing will be every one or five years depending on margin of compliance.
d.	e.	• The existing monitoring and recordkeeping condition was renumbered • The recordkeeping requirements were revised to include records associated with the one year/five year source tests.
e.	f.	• The reporting condition was renumbered.
NA	d.	• A condition was added that specifically addresses the contributions of PM from the refiner and forehearth.
2.	Same	2D .0516 condition
NA	NA	• No substantive changes other than removing the ability to fire No. 2 fuel oil.
3.	Same	2D .0521 condition
c.	Same	• Removed the following language: *The Permittee shall establish "normal" for the source in the first 30 days following the date the furnace reaches the steady state condition* • Added the following language to be consistent with standard permit condition requirements: *The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement*
4., 2.2.D.1.	Same	2D .0524 condition
		• This condition was replaced with a State Enforceable Only requirement that addresses the requirements imposed by SOC2002-002. The condition contains the 1 lb/ton filterable PM and 0.45 lb/ton fluoride emission limitations. Condition requires monitoring to determine compliance with the fluoride emission limitation. See permit review for rationale behind this change.
5.	Same	2D .0530 condition
		Added regulatory reference of 2Q .0317 as it is a PSD avoidance condition
a	Same	• Removed reference to fluoride limitation
b.	Same	• Removed fuel oil testing requirement; replaced it with standard DAQ testing requirement
c. through. g.	c.	• Simplified monitoring and recordkeeping requirements by removing redundant language. • Removed the following language: No monitoring/recordkeeping is required when burning natural gas/propane in the furnace 525. This requirement will now apply for all fuels combusted.

h.	NA	• This fuel oil monitoring requirement was removed.
i.	e.	• Simple renumbering • Reduce reporting from quarterly to semiannually. The emissions must now be calculated for each of the 12-month periods over the previous 17 months instead of the previous 14 months.
2.1.F.	**Same**	**Furnace No. 526**
		• Revised equipment descriptor to be consistent with permitted equipment list • Removed reference to No.2 fuel oil at the request of the Permittee. The Permittee will no longer be permitted to fire No. 2 fuel oil in this furnace.
2.1.F. applicable regulations table	Same	• Added reference to the state enforceable only fluoride emission limitations required pursuant to the SOC 2002-002.
1.	same	2D.0515 condition
c.	NA	• Removed initial testing condition as it has been satisfied.
d.	c.	• Reformatted condition; no substantial changes • Corrected typographical error (ES-507-M to 526M) • Simple renumbering
3	Same	2D .0521 condition
		• Added refiner and forehearth indicator for clarity purposes
c.	same	• Added the following language: The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement
NA	4.	• 2D .0521 condition for melter • A revised applicability analysis shows that NSPS Subpart CC is not an opacity standard, thus 2D .0521 applies and a condition was added to the permit to address the melter. A separate condition was added since it has substantially different requirements than the refiner and forehearth.
4.	NA.	• 2D .0530 condition • This condition was removed since the use of EFB and the inability to fire No.2 fuel oil will result in the sources' PTE to be well under the PSD avoidance limits contained in this condition.
5.	Same	2D .0530(u) condition
c.	NA	• Removed initial testing requirement required by application no. 14A. This testing has been satisfied. The condition also required a permit application to be submitted based on the results of this testing. This permit application was received on September 22, 2015. Condition d. below was revised accordingly.
NA	d	• Consistent with 2D .0530(u) conditions in other DAQ permits, a table of the projected actual emissions were added. The Permittee will note in the annual reports why the actual emissions exceeded the projected emissions (if necessary) • Based on the permit application received September 22, 2015, the projected actual emissions of NOx was revised from78.70 to 98.11 tpy.
2.2.A.1	6.	• An NSPS Subpart CC condition specifically for 526 was added to the permit. The requirements were previously located in Section 2.2.
2.1.G.	**Same**	**Storage Bins**
		• Arranged the listing of affected sources into tables to facilitate the regulatory applicability of permit condition 2.1.G.3., which addresses PSD avoidance.
2	same	• 2D .0521 condition
c.	Same	• Removed establish normal for ESDC 127 and 134 language; this requirement has been satisfied. • Added the following language: The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement
3.	Same	2Q .0317 for 2D .0530 (PSD avoidance)
a.	same	Revised condition to reference the tables of affected sources instead of listing all the

		affected sources
4.	NA	• Removed notification requirement as this requirement has been satisfied.
5.	NA	• Removed notification requirement as this requirement has been satisfied.
2.1.H.	**NA**	**PSD affected storage bins**
		• Revised equipment descriptors to be consistent with permitted equipment list
2	same	• 2D .0521 condition
c.	same	• Removed establish normal for ESDC121 language; this requirement has been satisfied. • Added the following language: The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement
2.1.I.	**Same**	**Four natural gas-fired in line dryers for furnace 526**
		• Added the heat input rates into the equipment descriptors
4	NA	• This notification requirement has been removed as it has been satisfied.
2.1.K.	**Same**	**one binder mix area room ventilation**
		•
2.1.M.	**Same**	**Four emergency engines**
		•
Applicable regulations table	Same	• Removed reference to 2Q .0711
2.	Same	• The 2D .0521 condition was substantially revised to include no monitoring, recordkeeping or reporting requirements consistent with current DAQ policy.
3	Same	• Added regulatory reference of 2Q .0317 as it is a PSD avoidance condition
c.	Same	• Removed the following language as it is redundant with General Condition O: The Permittee shall keep each monthly record on file for a minimum of three years
d.	same	• Reduced reporting to semiannually. Reporting was clarified to include monthly and total hours of operation of each generator and the monthly and total emissions of nitrogen oxides.
2.1.N	**Same**	**Two 25.1 million Btu per hour boilers and one 0.84 million Btu per hour boiler**
Applicable regulations table	Same	• Added reference to the applicability of 2D .1111 beginning May 20, 2019 for ESB83A and ESB83B • Removed reference to 2Q .0711
2.1.N.5.	Same	• Added MACT 5D condition to address the future requirements for ESB83A and ESB83B
2.1.O.	**Same**	**Natural gas-fired drying ovens and dielectric drying ovens**
		• Added heat input values to equipment descriptors based on application no. 10B
Applicable regulations table	Same	• Added reference to the applicability of 2D .1111 beginning May 20, 2019 • Clarified the applicability of 112(j) and MACT 5D is not for the dielectric ovens (ES-D1 through D4) • Removed orphaned footnotes from applicable regulations table
3.d.	Same	• Removed "establish normal" for ES-D3 and –D4 language; this requirement has been satisfied. • Added the following language: *The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement*
5, 6	NA	• These 2D .1100 reopen for cause conditions were removed as these sources were included in the last modeling demonstration on September 6, 2012.
NA	5	▪ Added a new 2D .1111 (MACT 5D) condition for the all-natural gas-fired ovens (combustion stacks). The compliance date for MACT 5D is May 20, 2019. The Permittee must satisfy the one time energy assessment and initial tune up requirement by the compliance date of May 20, 2019.
2.1.P.	**RESERVED**	**emergency engines and fire pumps**
		• Under current DAQ policy all sources qualifying as "insignificant activity because of size or production rate" pursuant to 15A NCAC 2Q.0503(8) do not need to be

		permitted explicitly in section 2.1 of the permit. However, at the request of the Permittee the conditions were left in the permit. No substantive changes were made to the permit conditions.
2.1.Q.	**Same**	**Raw Material Batch Bins and other PM emitting sources**
Table 2.1.Q	Same	• The vacuum systems in the existing section 2.1.S of the permit were consolidated into this Section.
2.c.	Same	• Removed the following language as it has been satisfied: *The Permittee shall establish normal for the source in the first 30 days following the effective date of the permit.*
3.	NA	This notification requirement was removed as it was satisfied in March 2007.
4	NA	This notification requirement was removed as it was satisfied in November 2010 and February 2011/.
2.1.R.	**Same**	**Remote wet cut lines no. 1 through 6**
		• Removed Table 2.1.R.-A, Existing Source Configuration as these sources have been removed •
1.b.	Same	• Removed reference to Table 2.1R-A
4.	NA	• The notification requirement was removed as it has been satisfied.
2.1.S.	2.1.Q	• Given the similarity in emissions and regulatory applicability of these cartridge filter controlled vacuum systems to the sources in Section Q, these sources were consolidated into Section Q.
2.1.T.	2.1.S	• Under current DAQ policy all sources qualifying as "insignificant activity because of size or production rate" pursuant to 15A NCAC 2Q.0503(8) do not need to be permitted explicitly in section 2.1 of the permit. However, at the request of the Permittee the conditions for ID No. ESDP93 were left in the permit. No substantive changes were made to the permit conditions.
2.1.U.	2.1.T.	• Under current DAQ policy all sources qualifying as "insignificant activity because of size or production rate" pursuant to 15A NCAC 2Q.0503(8) do not need to be permitted explicitly in section 2.1 of the permit. However, at the request of the Permittee the conditions for ID No. ESVAP1 were left in the permit. No substantive changes were made to the permit conditions.
2.2.A.1.	NA	• The NSPS Subpart CC condition was removed. The requirements for each furnace subject to NSPS Subpart CC are included in specific conditions in Section 2.1.
2.2.D.1	**2.2.A.1.**	**CAA 112(j) affected sources**
NA	1a.i	• The following language was added to this permit condition: "The Permittee shall comply with this CAA §112(j) standard until May 19, 2019. The initial compliance date for the applicable CAA §112(d) standard for ''National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters" is May 20, 2019, as specified in condition X below'.
2.2.D.1.	NA	• Added the state enforceable only fluoride emission limitations for the furnace melters required pursuant to the SOC 2002-002, including testing and associated M/R/R.

ATTACHMENT to cover letter to Air Quality Permit Number 01958T62

Insignificant Activities per 15A NCAC 2Q .0503(8)

Emission Source ID	Emission Source Description
I-BL142, I-BL143, and I-BL144	Three railcar unloading boots installed on unloading and transporting facilities
I506FBSB/ DC106	One bagfilter (10:1 gas-to-cloth ratio) installed on furnace batch storage silo serving furnace 506 (10 tons/hr nominal process rate)
I508FBSB/DC107	One bagfilter (10:1 gas-to-cloth ratio) installed on furnace batch storage silo serving furnace 508 (10 tons/hr nominal process rate)
I510FBSB/DC108	One bagfilter (10:1 gas-to-cloth ratio) installed on furnace batch storage silo serving furnace 510 (10 tons/hr nominal process rate)
I514FBSB/DC110	One bagfilter (10:1 gas-to-cloth ratio) installed on furnace batch storage silo serving furnace 514 (10 tons/hr nominal process rate)
I516FBSB/DC111	One bagfilter (10:1 gas-to-cloth ratio) installed on furnace batch storage silo serving furnace 516 (10 tons/hr nominal process rate)
IES130/DC130	One baghouse (10:1 gas-to-cloth ratio) installed on one hydrated lime storage silo
I-ESPF	Propane Flare (at propane farm)
~~IESVM84~~	~~Binder Ingredient Melt System~~
IESPC141	Alloy Plasma Coating Operation
I-ESMCP	Miller Chlorination Process (in Alloy shop)
I-ESAM95	Azdel Matline (No.2)
I-ESAM96	Azdel Matline (No.3)
I-WWTP-P108	Wastewater Treatment Plant Aeration Tanks #1 & #2
I-WWTP-P109	Wastewater Treatment Plant Primary Clarifiers #1 & #2
I-WWTP-P111	Wastewater Treatment Plant Secondary Clarifiers #1, #2 & #3
I-WWTP-P112	Wastewater Treatment Plant Secondary Clarifier Pump Suction Tank
I-ESWTPIST	Wastewater Treatment Plant Influent Surge Tank
I-ESWTPEHT	Wastewater Treatment Plant Effluent Holding Tank
I-WWTP-P107	Wastewater Treatment Plant Flash Mix Tank
I-WWTP-P106	Wastewater Treatment Plant Equalization Tank
I-WWTP-P110	Wastewater Treatment Plant Sludge Thickener Tank
I-ESWTPFCT	Wastewater Treatment Plant Ferric Chloride Tanks 1-3
I-ESWTPACT	Wastewater Treatment Plant Aluminum Chloride Tanks 1-2
I-ESWTPLH	Wastewater Treatment Plant Laboratory Hood
I-ESFOT	30,000 gallon fuel oil tank

Emission Source ID	Emission Source Description
I-ESFOT12	500,000 gallon fuel oil tanks #1 & #2
I-ESWDT	5000 gallon warehouse diesel tank
I-ESGFOT	5000 gallon #4&5 generator fuel oil tank
I-ESWOMT	2000 gallon winder oil mist storage tank
I-ESGT	1000 gallon gasoline tank
I-ES526FP	1000 gallon 526 furnace pump diesel tank
I-ESVFT	Various other fuel oil tanks <500 gallons
I-ESGLH12	Glass Laboratory Hoods #1 & #2
I-ESGLOHH12	Glass Lab Oven Heat Hoods #1 & #2
I-ES525LOHH	525 QC Lab Oven Heat Hoods #1 & #2
I-ESASH	Alloy Shop Hoods #1 & #2
I-ESASWH	Alloy Shop Weld Hoods
I-ESRE181	Science & Technology (Research Bldg) Extrusion, LFT, Injection Molding, and Oven Hood
I-ESRE182	Science & Technology (Research Bldg) Mixing Area Hood
I-ESRE183	Science & Technology (Research Bldg) Filament Winding Area
I-ESRE184	Science & Technology (Research Bldg) Ovens 1-6 and Peg Wetout
I-ESRE185	Science & Technology (Research Bldg) Autoclave
~~I-ESRE186~~	~~Science & Technology (Research Bldg) SMC Mixer~~
~~I-ESRE187~~	~~Science & Technology (Research Bldg) SMC Machine~~
~~I-ESRE188~~	~~Science & Technology (Research Bldg) BMC Mixer~~
I-ESRE189 I-ESRE190	Science & Technology (Research Bldg) Spray Booth
I-ESRE191	Science & Technology (Research Bldg) Burn Off Ovens 1-6
I-ESRE192	Science & Technology (Research Bldg) Weather-O-Meter
I-ESRE193	Science & Technology (Research Bldg) Sample Prep Room
~~I-ESRE194~~	~~Science & Technology Wet Lab Hood~~
~~I-ESRE195~~	~~Science & Technology (Research Bldg) DTUL Tester Hood~~
I-ESRE196	Science & Technology (Research Bldg) Pipe Cure, Berringer Oven and Wabash Press
I-ESREC197	Science & Technology (Research Bldg) Binder Lab hoods (4 hoods w/ common stack) Resin Storage and Dispensing
I-ESRE197	Science & Technology Area Electric Melter (40 lb/hr glass production capacity) with dust collector
I-ESRE198	Science & Technology (Research Bldg) SMC, Mixing and Pultrusion
I-ESREBL	Science & Technology (Research Bldg) Binder Lab hoods (3 hoods w/ common stack)

Emission Source ID	Emission Source Description
I-ESBSH	Buff shop hood with rotoclone
I-ESRQCLH	Roving QC Lab Hood
I-ESMWH	Maintenance welding Hood
I-ESHFSWH	Hercuflex fixer Shop Weld hood
I-ESSFFSWH	Special Fab Fixer Shop Weld Hood
I-ESDMCF	DMCF Fixer Shop Weld Hood
I-ESAEO	Ajax Electric Oven for bushings
I-ESARDO	Ajax Room Drying Oven
I-ESDSME	Drop Shot Melt equipment (training)
I-ESREC1	Reinforcement Evaluation Center (Development) Binder Mixing and Weighing)
I-ESREC2	Reinforcement Evaluation Center (Development) Rexnord Unit
I-ESUD155	Fugitive loss from transfer of material from bad batch bin to waste hopper
I-ESRE200	Science & Technology (Research Bldg) operations controlled by bagfilter
I-CTB-PC	Collet cleaning process consisting of a parts cleaner and dip tank
I-ESBSHPW	Rotoclone Area Parts Washer
I-ESRWCPW	Remote Wet Cut Area Parts Washer

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 2D .1100 “Control of Toxic Air Pollutants” or 2Q .0711 “Emission Rates Requiring a Permit”.
3. For additional information regarding regulatory applicability, see the DAQ page titled “The Regulatory Guide for Insignificant Activities/Permits Exempt Activities”. The link to this site is as follows: http://daq.state.nc.us/permits/insig/

State of North Carolina,
Department of Environmental Quality

Division of Air Quality

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
01958T62	01958T61	MM DD, 2014	MM DD, 2019

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 2D and 2Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 2Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee: **PPG Industries Fiber Glass Products, Inc.**
Facility ID: **2300153**

Facility Site Location: **940 Washburn Switch Road**
City, County, State, Zip: **Shelby, Cleveland County, North Carolina 28150**

Mailing Address: **940 Washburn Switch Road**
City, State, Zip: **Shelby, Cleveland County, North Carolina 28150**

Application Number: **2300153.09A. 23 00153.15A**
Complete Application Date: **January 26, 2009, September 22, 2015**

Primary SIC Code: **3229**
Division of Air Quality, Regional Office Address: **Mooresville Regional Office**
610 East Center Suite 301
Mooresville, NC 28115

Permit issued this the DDst day of MM, 2015

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William D., Willets, P.E., Chief, Permitting Section
By Authority of the Environmental Management Commission

Table Of Contents

SECTION 1- PERMITTED EMISSION SOURCE (S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE (S) AND APPURTENANCES

The following table contains a summary of all permitted emission sources and associated air pollution control devices and appurtenances:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Double level fiberglass furnace No. 520, using only EFB* technology, consisting of the following:			
520M **NSPS**	natural gas / propane / direct oxygen fired melter)7,280 pounds glass per hour maximum allowable pull rate)	NA	NA
520R	natural gas / propane-fired refiner	NA	NA
520F-A, 520F-B	two natural gas / propane-fired forehearths	NA	NA
Double level fiberglass furnace No. 524, using only EFB technology, consisting of the following:			
524M **NSPS**	natural gas / propane direct oxygen fired melter equipped with electric boost (1,950 kW capacity) (18,600 pounds glass per hour maximum allowable pull rate)	NA	NA
524R	natural gas / propane / direct oxygen-fired refiner	NA	NA
524F	natural gas / propane / direct oxygen-fired forehearth	NA	NA
Double level fiberglass furnace No. 525, using only EFB technology, consisting of the following:			
525M	natural gas / propane / direct oxygen fired melter (15,822 pounds glass per hour maximum allowable pull rate)	NA	NA
525R	natural gas / propane-fired refiner	NA	NA
525F	natural gas / propane-fired forehearth	NA	NA
Double level fiberglass furnace No. 526, using only EFB technology, consisting of the following:			
526M **NSPS**	natural gas / propane / direct oxygen fired melter with 2400 kW electric boost (20,000 pounds per hour maximum allowable glass pull rate)	NA	NA
526R	natural gas / propane-fired refiner	NA	NA
526F	natural gas / propane-fired forehearth	NA	NA
525FBSB#1 525FBSB#2	Two furnace batch storage bins serving furnace 525 (10.3 tons/hr nominal process rate each)	DC100 DC101	Two cartridge filters (1,080 square feet of filter area , each)
524FBSB#1, 524FBSB#2	Two furnace batch storage bins serving furnace 524 (30 tons/hr nominal process rate each)	DC102, DC103	Two baghouses (10:1 gas-to-cloth ratio each)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
520FBSB#1, 520FBSB#2	Two furnace batch storage bins serving furnace 520 (10 tons/hr nominal process rate each)	DC104, DC105	Two baghouses (10:1 gas-to-cloth ratio each)
526MBSB#1, 526MBSB#2	Two mixed batch storage bins serving furnace 526 (12.2 tons/hr nominal process rate each)	DC382, DC383	Two baghouses (5.3:1 gas-to-cloth ratio each)
EPDC129	One batch storage bin (13 tons/hr nominal process rate) serving furnace 526	DC-129	One baghouse (8:1 gas-to-cloth ratio)
ESDC112(silo #1)	One raw material storage silo (34 tons/hr nominal process rate)	DC112(silo #1)	bagfilter (10:1 gas-to-cloth ratio)
ESDC113(silo #2)	One raw material storage silo (34 tons/hr nominal process rate)	DC113(silo #2)	bagfilter (10:1 gas-to-cloth ratio)
ESDC114(silo #3)	One raw material storage silo (34 tons/hr nominal process rate)	DC114(silo #3)	bagfilter (10:1 gas-to-cloth ratio)
ESDC115(silo #4)	One raw material storage silo (34 tons/hr nominal process rate)	DC115(silo #4)	bagfilter (10:1 gas-to-cloth ratio)
ESDC116(silo #5)	One raw material storage silo (34 tons/hr nominal process rate)	DC116(silo#5), DC117(silo#5)	bagfilter (10:1 gas-to-cloth ratio) in parallel with bagfilter (10:1 gas-to-cloth ratio)
ESDC118(silo #6)	One raw material storage silo (34 tons/hr nominal process rate)	DC118(silo #6), DC131(silo #6)	bagfilter (10:1 gas-to-cloth ratio) in parallel with bagfilter (10:1 gas-to-cloth ratio
ESDC119 (silo #7), **PSD**	One batch storage silo (34 tons/hr nominal process rate)	DC119(silo#7)	One baghouse (10:1 gas-to-cloth ratio)
ESDC120 (silo #8) **PSD**	One batch storage silo (34 tons/hr nominal process rate)	DC120(silo#8)	One baghouse (10:1 gas-to-cloth ratio)
ESDC121 (silo #9), **PSD**	One batch storage silo (34 tons/hr nominal process rate)	DC121(silo#9), DC122(silo#9)	Cartridge filter (150 square feet of filter area) in parallel with Cartridge filter (150 square feet of filter area
ESDC123 (silo #10) **PSD**	One batch storage silo (34 tons/hr nominal process rate)	DC123(silo#10), DC152(silo#10)	two baghouses (10:1 gas-to-cloth ratio each)
ESDC124(silo #11)	One raw material storage silo (34 tons/hr nominal process rate)	DC124(silo #11)	bagfilter (10:1 gas-to-cloth ratio)
ESDC125(silo #12)	One raw material storage silo (34 tons/hr nominal process rate)	DC125(silo #12)	bagfilter (10:1 gas-to-cloth ratio)
ESDC126(silo #13)	One raw material storage silo (34 tons/hr nominal process rate)	DC126(silo #13)	bagfilter (10:1 gas-to-cloth ratio)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESDC127(silo #14)	One raw material storage silo (34 tons/hr nominal process rate)	DC127(silo #14)	Cartridge filter (150 square feet of filter area)
ESDC153(silo #15)	One raw material storage silo (34 tons/hr nominal process rate)	DC153(silo #15)	bagfilter (10:1 gas-to-cloth ratio)
ESDC154 (silo #16)	One raw material storage silo (34 tons/hr nominal process rate)	DC154(silo #16)	bagfilter (10:1 gas-to-cloth ratio)
ESDC132(silo #18)	One raw material storage silo (34 tons/hr nominal process rate)	DC132(silo #18), DC133(silo #18)	bagfilter (10:1 gas-to-cloth ratio) in parallel with bagfilter (10:1 gas-to-cloth ratio)
ESDC134(silo #19)	One raw material storage silo (34 tons/hr nominal process rate)	DC134(silo #19), DC135(silo #19)	Cartridge filter (150 square feet of filter area) in parallel with Cartridge filter (150 square feet of filter area)
ESWC367a	Remote Wet Cut Line No. 1 (3,500 lbs/hr dry nominal production rate) including a natural gas-fired dryer (3.5 million Btu per hour maximum heat input rate)	CDWC367	Venturi scrubber (80 gallons per minute minimum liquid injection rate)
ESWC368a	Remote Wet Cut Line No. 2 (3,500 lbs/hr dry nominal production rate) including a natural gas-fired dryer (3.5 million Btu per hour maximum heat input rate)	CDWC368	Venturi scrubber (80 gallons per minute minimum liquid injection rate)
ESWC369a	Remote Wet Cut Line No. 3 (3,500 lbs/hr dry nominal production rate) including a natural gas-fired dryer (3.5 million Btu per hour maximum heat input rate)	CDWC369	Venturi scrubber (80 gallons per minute minimum liquid injection rate)
ESWCL370	Remote Wet Cut Line No. 4 (3,000 lbs/hr dry nominal production rate) including a natural gas-fired dryer (3.5 million Btu per hour maximum heat input rate)	CDWC370	Venturi scrubber (80 gallons per minute minimum liquid injection rate)
ESWCL371	Remote Wet Cut Line No. 5 (3,000 lbs/hr dry nominal production rate) including a natural gas-fired dryer (3.5 million Btu per hour maximum heat input rate)	CDWC371	Venturi scrubber (80 gallons per minute minimum liquid injection rate)
ESWCL372	Remote Wet Cut Line No. 6 (3,500 lbs/hr dry nominal production rate) including a natural gas-fired dryer (3.5 million Btu per hour maximum heat input rate)	CDWC372	Venturi scrubber (80 gallons per minute minimum liquid injection rate)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES378	One natural gas-fired in-line dryer supporting furnace 526 (2,400 dry lbs/hr nominal production rate)	EC378	One venturi scrubber (45 gallons per minute liquid injection rate)
ES381	One natural gas-fired in-line dryer supporting furnace 526 (1,500 dry lbs/hr nominal production rate)	EC381	One venturi scrubber (45 gallons per minute liquid injection rate)
ES379	One natural gas-fired in-line dryers supporting furnace 526 (2,100 dry lbs/hr nominal production rate each)	EC379	One venturi scrubber (45 gallons per minute liquid injection rate)
ES380	One natural gas-fired in-line dryers supporting furnace 526 (2,100 dry lbs/hr nominal production rate each)	EC380	One venturi scrubber (45 gallons per minute liquid injection rate)
ES97	One binder mix room ventilation (12,000 lbs/hr nominal process rate)	97EC	One cartridge filter (3,048 square feet of filter area)
ESCC96	One caustic brush cleaning system (2,600 lbs/hr nominal process rate)	CDWS96	One packed cross-flow scrubber (34 gallons per minute liquid injection rate)
ESB83A **2D .1109 Case-by-Case MACT**	One natural gas/No. 2 fuel oil fired boiler (25.1 million Btu per hour nominal heat input rate)	NA	NA
ESB83B **2D .1109 Case-by-Case MACT**	One natural gas/No. 2 fuel oil fired boiler (16.33 million Btu per hour nominal heat input rate)	NA	NA
ESB83C **MACT 5D**	Natural gas-fired boiler (0.84 million Btu per hour heat input rate)	NA	NA
ESVAP1 **MACT 5D**	Propane-fired propane vaporizer (4.2 million Btu per hour heat input rate)	NA	NA
ES-1 through, ES-5, ES-7 through ES-11 ES-17 through ES-18 **2D .1109 Case-by-Case MACT**	Twelve natural gas-fired fiberglass drying ovens (3.4 million Btu per hour maximum heat input, each)	NA	NA
ES-6, ES-12 ES-19 through ES-21 **2D .1109 Case-by-Case MACT**	Five natural gas-fired fiberglass drying ovens (1.5 million Btu per hour maximum heat input, each)	NA	NA
ES-14a, ES-14b, ES-14c, ES-15a, ES-15b, ES-15c, **2D .1109 Case-by-Case MACT**	Six natural gas-fired fiberglass drying ovens (0.92 million Btu per hour maximum heat input, each)	NA	NA

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-D1 through ES-D4	Four single lane dielectric fiberglass drying oven (1,800 pounds per hour throughput capacity, each)	NA	NA
Raw material batch house bins identified as follows:			
EPDC160, EPDC161	Blender A, Blender B	DC160, DC161	Cartridge-type filter. each
EPDC162	Silo 17	DC162	Cartridge-type filter
EPDC163, EPDC164, EPDC165	Scale Bin 1, Scale Bin 2, Scale Bin 3	DC163,DC164, DC165	Cartridge-type filter. each
EPDC166, EPDC167	Scale Bin 4A, Scale Bin 4B	DC166, DC167	Cartridge-type filter. each
EPDC168, EPDC169, EPDC170, EPDC171	Scale Bin 5, Scale Bin 6, Scale Bin 7, Scale Bin 8	DC168, DC169, DC170, DC171	Cartridge-type filter. each
EPDC172, EPDC173, EPDC174	Bag Breaker 1, Bag Breaker 2, Bag Breaker 3	DC172, DC173, DC174	Cartridge-type filter. each
EPDC175	Silo 20	DC175	Cartridge-type filter. each
EPDC176	Scale Bin 11	DC176	Cartridge-type filter. each
EPDC177, EPDC178, EPDC179, EPDC180, EPDC181	MBSB 1, MBSB 2, MBSB 3, MBSB 6, MBSB 7	DC177, DC178, DC179, DC180, DC181	Cartridge-type filter. each
EPDC184	Raw Material Batch Bin MBSB5 (755 cubic feet storage capacity)	DC184	Cartridge filter (1,470 square feet of filter area)
EPDC185	Raw Material Batch Bin MBSB8 (755 cubic feet storage capacity)	DC185	Cartridge filter (1,470 square feet of filter area)
EPDC186	Raw Material Batch Bin MBSB9 (776 cubic feet storage capacity)	DC186	Cartridge filter (1,470 square feet of filter area)
EPDC187	Raw Material Batch Bin MBSB10 (776cubic feet storage capacity)	DC187	Cartridge filter (1,470 square feet of filter area)
Vacuum Systems			
EPDC182	Batch House Central Vacuum System	DC182	Cartridge-type filter (1,860 square feet of filter area)
EPDC183	Batch House Scale Area Vacuum System	DC183	Cartridge-type filter (18,288 square feet of filter area)
Internal Combustion Engines			

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESDG85, ESDG86, ESDG88A, ESDG88B **MACT Subpart ZZZZ**	Four diesel-fired emergency generators (two 1200 hp each and two 1800 hp each)	NA	NA
ESDP366 **MACT Subpart ZZZZ**	Process Water (Return), Emergency Diesel fuel-fired Pump 524 (115 BHP)	NA	NA
ESDP89 **MACT Subpart ZZZZ**	Process Water (Supply) Emergency Diesel fuel-fired Pump 524 (325 BHP)	NA	NA
ESDP90 **MACT Subpart ZZZZ**	Process Water (Supply) Emergency Diesel fuel-fired Pump 525 (290 BHP)	NA	NA
ESDP91 **MACT Subpart ZZZZ**	Process Water (Return) Emergency Diesel fuel-fired Pump 525 (115 BHP)	NA	NA
ESDP92 **MACT Subpart ZZZZ**	Process Water GM Emergency Diesel fuel-fired Pump Loop 1&2 (Supply) (250 BHP)	NA	NA
ESDP93 **MACT Subpart ZZZZ** **NSPS Subpart IIII**	Process Water (Supply) Emergency Diesel fuel-fired Pump 526 (173 BHP)	NA	NA
ESDP94 **MACT Subpart ZZZZ**	Process Water (Return) Emergency Diesel fuel-fired Pump 526 (125 BHP)	NA	NA
ES-FP1 **MACT Subpart ZZZZ**	Emergency Diesel fuel-fired Fire Pump (250 BHP)	NA	NA
ES-CAEB524 **MACT Subpart ZZZZ**	Emergency Natural Gas-fired Blower 524 (150 BHP)	NA	NA
ES-CAEB525 **MACT Subpart ZZZZ**	Emergency Natural Gas-fired Blower 525 (150 BHP)	NA	NA
ES-CAEB526 **MACT Subpart ZZZZ**	Emergency Natural Gas-fired Blower 526 (150 BHP)	NA	NA

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) and Control Devices(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

A. Reserved

B. Reserved

C. The following sources:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Double level fiberglass furnace No. 520, using only EFB technology, consisting of the following:			
520M **NSPS**	natural gas / propane / direct oxygen fired melter) 7,280 pounds glass per hour maximum allowable pull rate)	NA	NA
520R	natural gas / propane-fired refiner	NA	NA
520FA, 520FB	two natural gas / propane-fired forehearths	NA	NA

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter (from melter, refiner, and forehearth)	$E = 4.10P^{0.67}$ Where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
sulfur dioxide	2.3 pounds per million Btu heat input each	15A NCAC 2D .0516
visible emissions from melter, refiner and forehearth	20 percent opacity each	15A NCAC 2D .0521
fluorides	**Melter only**, **State Enforceable Only** 0.45 pounds per ton of glass pulled (annual basis) See Section 2.2.D.1.	NCGS 143-215.108(c)
particulate matter (filterable only)	**Melter only** (ID No. 520M) 1.0 pounds per ton of glass produced	15A NCAC 2D .0524 (NSPS Subpart CC)
PM-10 (from melter, refiner, and forehearth)	108.7 tons per consecutive 12-month period	15A NCAC 2D .0530 (PSD avoidance)
total particulate matter (from melter)	97.15 tons per consecutive 12-month period	
fluorides (from melter)	36.34 tons per consecutive 12-month period	
Fluorides	41.35 tons per consecutive 12-month period	
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.1.	15A NCAC 2D .1100

Regulated Pollutant	Limits/Standards	Applicable Regulation
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.2.	15A NCAC 2Q .0711

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from the melter, refiner, and forehearth combined shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$

Where E = allowable emission rate in pounds per hour; and
P = process weight in tons per hour

Liquid and gaseous fuels, combustion air and stoichiometric combustion oxygen are not considered as part of the process weight.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above by testing fiberglass furnace melter (**ID No. 520M**) in accordance with General Condition JJ. Testing shall be completed within 180 days after the issuance of permit no. **T62**, unless an alternate date is approved by the DAQ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

d. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above on an annual basis by testing the fiberglass furnace melter (**ID No. 520M**) in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ. If the results of this test, in conjunction with condition e. below, are:
   i. less than 80 percent of the emission limit in condition a. above, the Permittee shall be required to stack test once every five years following the last stack test; or
   ii. above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

e. For the purposes of determination of compliance with condition a., the contribution of particulate matter emissions from the refiner and forehearth are assumed to be:

PM (filterable)	10% of the total furnace PM(filterable) emissions
PM (condensable)	10% of the total furnace PM(condensable) emissions

These emission factors may be revised administratively pending final review and approval of new source test data submitted to the DAQ.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

f. The Permittee shall maintain production records such that the process rates "P" can be derived as specified above, and shall make these records available to the DAQ upon request.
   i. The records shall include:
      A. the date and approval status of the most recent source test conducted pursuant to condition d. above;
      B. the production rate at which the source test was conducted; and
      C. the maximum production rate achieved since the most recent source test conducted pursuant to condition d. above.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not

maintained.

Reporting [15A NCAC 2Q .0508(f)]

g The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas/propane/ No. 2 fuel oil in these sources.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS (refiner and forehearth)

a. Visible emissions from the furnace (refiner and forehearth only) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

c. To assure compliance, once a week the Permittee shall observe the emission points from the furnace refiner and forehearth for any visible emissions above normal. The weekly observation must be made for each month/week of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in condition a. above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

d. The results of the observed opacity monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. To comply with this permit and avoid the applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, emissions from these sources shall not exceed the following limitations:

Pollutant	Emissions Limitation
PM-10 (filterable and condensable)	108.7 tons per consecutive 12-month period (from melter, refiner, and forehearth)
Particulate matter	97.15 tons per consecutive 12-month period (from melter)

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. The Permittee shall record monthly the emissions of pollutants listed in condition a. above from the melter, refiner, and forehearth. Monthly emissions shall be based on the actual production rate of the furnace multiplied by an emission factor determined during the last annual testing of furnace 520. The Permittee shall maintain each monthly record on file for a minimum of five (5) years. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the above records are not kept or if any of the pollutant emissions exceed their respective limit stated in condition a. above.

Reporting [15A NCAC 2Q .0508(f)]

d. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall contain the following:

i. The monthly emissions for each pollutant listed in condition a. for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

5. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS

a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart CC, including Subpart A "General Provisions."[15A NCAC 02D .0524]

Emission Limitations [15A NCAC 02D .0524, 40CFR 60.293(b)**]**

b. The filterable particulate matter emissions from the furnace melter (ID No. 520M) shall not exceed **1.0 pound per ton of glass produced.**

Testing [15A NCAC 02Q .0508(f), 40 CFR 60.293(f)]

c. The Permittee shall demonstrate compliance with the emission limit in condition b. above on an annual basis by testing the fiberglass furnace melter in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ. Testing shall be completed within 180 days after the issuance of permit no. **T62**, unless an alternate date is approved by the DAQ.
If the results of this test are:
   i. less than 80 percent of the emission limit in condition b. above, the Permittee shall be required to stack test once every five years following the last stack test; or
   ii. above the limit given in condition b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

Monitoring [15A NCAC 02Q .0508(f), 40 CFR 60.13 and 60.293]

d. The Permittee shall use a continuous opacity monitor system (COMS) to monitor and record opacity from the furnace melter. The COMS shall be calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications", 40 CFR 60.13 and 15A NCAC 02D .0613.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if any three-hour block average opacity value, excluding periods of startup, shut down, malfunction from the furnace melter exceeds **24.3 percent opacity**.

The three-hour block average opacity limit above was established by using the three 1-hour average opacity values from the compliance stack test and determining the 99% Upper Confidence Limit (UCL) of the three 1-hour averages. The resultant three-hour opacity UCL value was then pro-rated to the NSPS particulate limit (1.0 pounds of PM per ton of glass pulled), by using the average PM emission value determined during the compliance stack test.

A three-hour block average opacity value shall be calculated as the arithmetic average of any and all valid six-minute averages within the three-hour period. A three-hour period means a 180- minute period commencing at 12am, 3am, 6am, 9am, 12pm, 3pm, 6pm, and 9pm each day. Valid six-minute averages are calculated per 40 CFR 60.13.

The Permittee may at anytime, reestablish, through administratively amending this permit consistent with 15A NCAC 02Q .0500, the three-hour block average opacity values contained in condition d. above.

e. For the purposes of 40 CFR 60.293(c)(5) and 60.7, Excess Emissions are defined as all of the 6-minute periods during which the average opacity of the emissions from the furnace melter (ID No. 520M) exceed the 99% UCL values determined from a compliance stack test as provided in 40 CFR 60.293(e) as presented below:

   i. **19.4 percent opacity** when firing natural gas/propane.

The Permittee may at any time, consistent with the provisions of 40 CFR 60.293(e), reestablish, through administratively amending this permit consistent with 15A NCAC 02Q .0500, the UCL values contained in condition e. above.

f. The Permittee shall calculate the Percent Excess Emissions and the Percent COMS Downtime using the equations listed below:

Percent Excess Emissions (%EE):

$$\%EE = \frac{Duration\ of\ Excess\ Emissions - Duration\ of\ Excess\ Emissions\ During\ StartUp/\ ShutDown/\ Malfunction/}{Furnace\ Operating\ Time - Duration\ of\ StartUp\ Shutdown/\ Malfunction/} * 100\%$$

Percent COMs Downtime (%CD):

$$\%CD = \frac{COMs\ Downtime}{Furnace\ Operating\ Time} * 100\%$$

Where:

Excess Emissions	=	*Defined in paragraph e.*
Duration of Excess Emissions	=	*Summation of the excess emissions in hours during the given calendar three-month period*
Duration of Excess Emissions During StartUp/ ShutDown/ Malfunction	=	*Summation of the excess emissions in hours occurring during all periods of startup/shutdown/malfunction during the given calendar three-month period*
*Furnace Operating Time**	=	*Summation of the operation time of the source in hours during the given calendar three-month period*
Duration of StartUp/ ShutDown/ Malfunction	=	*Summation of the operation time of the source in hours occurring during all periods of startup/shutdown/malfunction during the given calendar three-month period*
*COMs downtime***	=	*Summation of time in hours during which the COMs is not operational and concurrent with the Furnace Operating Time during the given calendar three-month period*

* If the furnace operates less than 500 hours during any calendar three-month period, the Permittee may perform the above calculations using all of the operating data for the current calendar three-month period and the most recent data for the proceeding calendar three-month period until 500 hours of data are obtained. [N.C.G.S. 143-215.110]

** Quality assurance (QA) activities will be included in this calculation unless exempt by regulation or defined in an agency approved Quality Assurance (QA) Manual. The amount of exempt QA time will be reported in the report per condition k.

Acceptable Operation and Maintenance [15A NCAC 02D .0524, 40CFR 60.293(c)]

g. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the Percent Excess Emissions from the fiberglass furnace melter exceeds **3 percent** or if the Percent COMS Downtime exceeds **3 percent** in any calendar three-month period (January through March, April through June, July through September October through December).

Recordkeeping [15A NCAC 02Q .0508(f)]

h. Pursuant to 40 CFR 60.7(b), the Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

i. Pursuant to 40 CFR 60.7(f), the Permittee shall maintain records of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; recorded in a permanent form suitable for inspection. The records shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.

j. The Permittee shall record and maintain records of:

i. Furnace operating time;
ii. Three-hour block average opacity values.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the recordkeeping requirements in conditions h. through j. are not met.

Reporting [15A NCAC 02Q .0508(f)]

k. On a quarterly basis, the Permittee shall:

i. Submit a report containing Percent Excess Emissions, Percent COMs Downtime, and Furnace Operating Time, as defined in condition f. above

ii. pursuant to 40 CFR 60.293(c)(5) and 40 CFR 60.7(c), submit an excess emissions and monitoring system performance summary report. The report shall contain the information required per 40 CFR 60.7(c) and (d).

iii. submit a report of the three-hour block average opacity values, as defined in condition d. that exceed **24.3 percent opacity**.

The quarterly reports, acceptable to the Regional Air Quality Supervisor, shall be postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September.

6. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS (melter)

a. Visible emissions from the fiberglass furnace melter, **ID No. 520M**) shall not be more than **20 percent opacity** when averaged over a six-minute period. [15A NCAC 02D .0521(c)]

b. For sources required to install, operate, and maintain continuous opacity monitoring systems (COMS), compliance with the 20 percent opacity limit shall be determined as follows:[15A NCAC 02D .0521(g)]

i. No more than four six-minute periods shall exceed the opacity standard in any one day; and

ii. The percent of excess emissions (defined as the percentage of monitored operating time in a calendar quarter above the opacity limit) shall not exceed 0.8 percent of the total operating hours. If a source operates less than 500 hours during a calendar quarter, the percent of excess emissions shall be calculated by including hours operated immediately previous to this quarter until 500 operational hours are obtained.

Excess emissions during startup and shutdown shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 02D .0535(g). Excess emissions during malfunctions shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 02D .0535(c).

All periods of excess emissions shall be included in the determinations in paragraphs b.i. and b.ii above until such time that the excess emissions are exempted according to the procedures in 02D .0535.

Testing [15A NCAC 2Q .0508(f)

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

d. The Permittee shall use a continuous opacity monitor system (COMS) to monitor and record opacity from the melter. The COMS shall be calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and 15A NCAC 02D .0613. No monitoring or recordkeeping requirements are required for the distributor and forehearths.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the monitoring is not performed, if the monitored values exceed the limitations given in conditions a. and b. above, or if the records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit the COMS data in accordance with the reporting requirements given in condition **2.1.C.5.k.** (Subpart CC reporting requirements). All instances of excess emissions with respect to 15A NCAC 02D .0521 must be clearly identified.

D. The following furnace:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Double level fiberglass furnace No. 524, using only EFB technology, consisting of the following:			
524M **NSPS**	natural gas / propane direct oxygen fired melter equipped with electric boost (1,950 kW capacity) (18,600 pounds glass per hour maximum allowable pull rate)	NA	NA
524R	natural gas / propane / direct oxygen-fired refiner	NA	NA
524F	natural gas / propane / direct oxygen-fired forehearth	NA	NA

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter (from melter, refiner, and forehearth)	$E = 4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
visible emissions from melter, refiner and forehearth	20 percent opacity	15A NCAC 2D .0521
Fluorides	**Melter only**, **State Enforceable Only** 0.45 pounds per ton of glass pulled (annual basis) See Section 2.2.D.1.	NCGS 143-215.108(c)
Particulate matter (filterable only)	**Melter only** (ID No. 524M) 1.0 pounds per ton of glass produced	15A NCAC 2D .0524 (NSPS Subpart CC)
particulate matter (from melter, refiner, and forehearth)	72.33 tons per consecutive 12-month period	15A NCAC 2D .0530 (PSD avoidance)
PM-10 (from melter, refiner, and forehearth)	58.19 tons per consecutive 12-month period	
nitrogen oxides	91.20 tons per consecutive 12-month period	
sulfur dioxide	114.4 tons per consecutive 12-month period	
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.1.	15A NCAC 2D .1100
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.2.	15A NCAC 2Q .0711

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from the melter, refiner, and forehearth combined shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels, combustion air and stoichiometric combustion oxygen are not considered as part of the process weight.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above on an annual basis by testing the fiberglass furnace melter (**ID No. 524M**) in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ.

i. The Permittee satisfied the initial testing requirement on August 23, 2012.

If the results of this test, in conjunction with condition d. below, are
i. less than 80 percent of the emission limit in condition a. above, the Permittee shall be required to stack test once every five years following the last stack test; or
ii. above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

d. For the purposes of determination of compliance with condition a., the contribution of particulate matter emissions from the refiner and forehearth are assumed to be:

PM (filterable)	10% of the total furnace PM(filterable) emissions
PM (condensable)	10% of the total furnace PM(condensable) emissions

These emission factors may be revised administratively pending final review and approval of new source test data submitted to the DAQ.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

e. The Permittee shall maintain production records such that the process rates "P" can be derived as specified above, and shall make these records available to the DAQ upon request.
i. The records shall include:
A. the date and approval status of the most recent source test conducted pursuant to condition c. above;
B. the production rate at which the source test was conducted; and
C. the maximum production rate achieved since the most recent source test conducted pursuant to condition c. above.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas/propane in this source.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS (refiner and forehearth)

a. Visible emissions from the furnace (refiner and forehearth only) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

c. To assure compliance, once a week the Permittee shall observe the emission points from the furnace refiner and forehearth for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in condition a. above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

d. The results of the observed opacity monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS (melter)

a. Visible emissions from the fiberglass furnace melter, **ID No. 524M**) shall not be more than **20 percent opacity** when averaged over a six-minute period. [15A NCAC 02D .0521(c)]

b. For sources required to install, operate, and maintain continuous opacity monitoring systems (COMS), compliance with the 20 percent opacity limit shall be determined as follows:[15A NCAC 02D .0521(g)]

i. No more than four six-minute periods shall exceed the opacity standard in any one day; and

ii. The percent of excess emissions (defined as the percentage of monitored operating time in a calendar quarter above the opacity limit) shall not exceed 0.8 percent of the total operating hours. If a source operates less than 500 hours during a calendar quarter, the percent of excess emissions shall be calculated by including hours operated immediately previous to this quarter until 500 operational hours are obtained.

Excess emissions during startup and shutdown shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 02D .0535(g). Excess emissions during malfunctions shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 02D .0535(c).

All periods of excess emissions shall be included in the determinations in paragraphs b.i. and b.ii above until such time that the excess emissions are exempted according to the procedures in 02D .0535.

Testing [15A NCAC 2Q .0508(f)

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

d. The Permittee shall use a continuous opacity monitor system (COMS) to monitor and record opacity from the melter. The COMS shall be calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and 15A NCAC 02D .0613. No monitoring or recordkeeping requirements are required for the distributor and forehearths.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the monitoring is not performed, if the monitored values exceed the limitations given in conditions a. and b. above, or if the records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit the COMS data in accordance with the reporting requirements given in condition **2.1.D.6.k.** (Subpart CC reporting requirements). All instances of excess emissions with respect to 15A NCAC 02D .0521 must be clearly identified.

5. 15A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. To comply with this permit and avoid the applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, emissions from the furnace (ID No. 524), including the melter, refiner, and forehearth, shall not exceed the following limitations:

Pollutant	Emissions Limitation
sulfur dioxide	114.4 tons per consecutive 12-month period
particulate matter	72.33 tons per consecutive 12-month period
PM-10	58.19 tons per consecutive 12-month period
nitrogen oxides	91.2 tons per consecutive 12-month period

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. The Permittee shall record monthly the emissions of pollutants listed in condition a. above from the melter, refiner, and forehearth. Monthly emissions shall be based on the actual production rate of the furnace multiplied by an emission factor determined during the last annual testing of furnace 525. The Permittee shall maintain each monthly record on file for a minimum of five (5) years. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the above records are not kept or if any of the pollutant emissions exceed their respective limit stated in condition a. above.

Reporting [15A NCAC 2Q .0508(f)]

d. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall contain the following:

i. The monthly emissions for each pollutant listed in condition a. for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

6. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS

a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart CC, including Subpart A "General Provisions."[15A NCAC 02D .0524]

Emission Limitations [15A NCAC 02D .0524, 40CFR 60.293(b)**]**

b. The filterable particulate matter emissions from the furnace melter (ID No. 524M) shall not exceed **1.0 pound per ton of glass produced.**

Testing [15A NCAC 02Q .0508(f), 40 CFR 60.293(f)]

c. The Permittee shall demonstrate compliance with the emission limit in condition b. above on an annual basis by testing the fiberglass furnace melter in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ.

i. The Permittee satisfied the initial testing requirement on August 23, 2012.

If the results of this test are:

i. less than 80 percent of the emission limit in condition b. above, the Permittee shall be required to stack test once every five years following the last stack test; or
ii. above the limit given in condition b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

Monitoring [15A NCAC 02Q .0508(f), 40 CFR 60.13 and 60.293]

d. The Permittee shall use a continuous opacity monitor system (COMS) to monitor and record opacity from the furnace melter. The COMS shall be calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications", 40 CFR 60.13 and 15A NCAC 02D .0613.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if any three-hour block average opacity value, excluding periods of startup, shut down, malfunction from the furnace melter exceeds **11.8 percent opacity**.

The three-hour block average opacity limit above was established by using the three 1-hour average opacity values from the compliance stack test and determining the 99% Upper Confidence Limit (UCL) of the three 1-hour averages. The resultant three-hour opacity UCL value was then pro-rated to the NSPS particulate limit (1.0 pounds of PM per ton of glass pulled), by using the average PM emission value determined during the compliance stack test.

A three-hour block average opacity value shall be calculated as the arithmetic average of any and all valid six-minute averages within the three-hour period. A three-hour period means a 180- minute period commencing at 12am, 3am, 6am, 9am, 12pm, 3pm, 6pm, and 9pm each day. Valid six-minute averages are calculated per 40 CFR 60.13.

The Permittee may at anytime, reestablish, through administratively amending this permit consistent with 15A NCAC 02Q .0500, the three-hour block average opacity values contained in condition d. above.

e. For the purposes of 40 CFR 60.293(c)(5) and 60.7, Excess Emissions are defined as all of the 6-minute periods during which the average opacity of the emissions from the furnace melter (ID No. 524M) exceed the 99% UCL values determined from a compliance stack test as provided in 40 CFR 60.293(e) as presented below:

i. **6.9 percent opacity** when firing natural gas/propane.

The Permittee may at any time, consistent with the provisions of 40 CFR 60.293(e), reestablish, through administratively amending this permit consistent with 15A NCAC 02Q .0500, the UCL values contained in condition e. above.

f. The Permittee shall calculate the Percent Excess Emissions and the Percent COMS Downtime using the equations listed below:

Percent Excess Emissions (%EE):

$$\%EE = \frac{Duration\ of\ Excess\ Emissions - Duration\ of\ Excess\ Emissions\ During\ StartUp/\ ShutDown/\ Malfunction/}{Furnace\ Operating\ Time - Duration\ of\ StartUp\ Shutdown/\ Malfunction/} * 100\%$$

Percent COMs Downtime (%CD):

$$\%CD = \frac{COMs\ Downtime}{Furnace\ Operating\ Time} * 100\%$$

Where:

Excess Emissions	=	*Defined in paragraph e.*
Duration of Excess Emissions	=	*Summation of the excess emissions in hours during the given calendar three-month period*
Duration of Excess Emissions During StartUp/ ShutDown/ Malfunction	=	*Summation of the excess emissions in hours occurring during all periods of startup/shutdown/malfunction during the given calendar three-month period*
*Furnace Operating Time**	=	*Summation of the operation time of the source in hours during the given calendar three-month period*
Duration of StartUp/ ShutDown/ Malfunction	=	*Summation of the operation time of the source in hours occurring during all periods of startup/shutdown/malfunction during the given calendar three-month period*
*COMs downtime***	=	*Summation of time in hours during which the COMs is not operational and concurrent with the Furnace Operating Time during the given calendar three-month period*

* If the furnace operates less than 500 hours during any calendar three-month period, the Permittee may

perform the above calculations using all of the operating data for the current calendar three-month period and the most recent data for the proceeding calendar three-month period until 500 hours of data are obtained. [N.C.G.S. 143-215.110]

** Quality assurance (QA) activities will be included in this calculation unless exempt by regulation or defined in an agency approved Quality Assurance (QA) Manual. The amount of exempt QA time will be reported in the report per condition k.

Acceptable Operation and Maintenance [15A NCAC 02D .0524, 40CFR 60.293(c)]

g. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the Percent Excess Emissions from the fiberglass furnace melter exceeds **3 percent** or if the Percent COMS Downtime exceeds **3 percent** in any calendar three-month period (January through March, April through June, July through September October through December).

Recordkeeping [15A NCAC 02Q .0508(f)]

h. Pursuant to 40 CFR 60.7(b), the Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

i. Pursuant to 40 CFR 60.7(f), the Permittee shall maintain records of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; recorded in a permanent form suitable for inspection. The records shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.

j. The Permittee shall record and maintain records of:

   i. Furnace operating time;
   ii. Three-hour block average opacity values.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the recordkeeping requirements in conditions h. through j. are not met.

Reporting [15A NCAC 02Q .0508(f)]

k. On a quarterly basis, the Permittee shall:

   i. Submit a report containing Percent Excess Emissions, Percent COMs Downtime, and Furnace Operating Time, as defined in condition f. above
   ii. pursuant to 40 CFR 60.293(c)(5) and 40 CFR 60.7(c), submit an excess emissions and monitoring system performance summary report. The report shall contain the information required per 40 CFR 60.7(c) and (d).
   iii. submit a report of the three-hour block average opacity values, as defined in condition d., that exceed **11.8 percent opacity**.

The quarterly reports, acceptable to the Regional Air Quality Supervisor, shall be postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September.

E. The following furnace:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Double level fiberglass furnace No. 525, using only EFB technology, consisting of the following:			
525M	natural gas / propane / direct oxygen fired melter (15,822 pounds glass per hour maximum allowable pull rate)	NA	NA
525R	natural gas / propane-fired refiner	NA	NA
525F	natural gas / propane-fired forehearth	NA	NA

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter (from melter, refiner, and forehearth)	$E = 4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
visible emissions	20 percent opacity	15A NCAC 2D .0521
particulate matter (filterable only)	Melter only, **State Enforceable Only** 1.0 pounds per ton of glass produced	NCGS 143-215.108(c)
fluorides	Melter only, **State Enforceable Only** 0.45 pounds per ton of glass pulled (annual basis) See Section 2.2.D.1.	NCGS 143-215.108(c)
particulate matter (from melter, refiner, and forehearth)	81.63 tons per consecutive 12-month period	15A NCAC 2Q.0317 (PSD avoidance)
PM-10 (from melter, refiner, and forehearth)	71.63 tons per consecutive 12-month period	
nitrogen oxides	100 tons per consecutive 12-month period	
sulfur dioxide	164.69 tons per consecutive 12-month period	
carbon monoxide	114.55 tons per consecutive 12-month period	
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.1.	15A NCAC 2D .1100
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.2.	15A NCAC 2Q .0711

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from the melter, refiner, and forehearth combined shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels, combustion air and stoichiometric combustion oxygen are not considered as part of the process weight.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above on an annual basis by testing the fiberglass furnace melter (**ID No. 525M**) in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ.

i. The Permittee satisfied the initial testing requirement on January 18, 2012.

If the results of this test, in conjunction with condition d. below, are:

i. less than 80 percent of the emission limit in condition a. above, the Permittee shall be required to stack test once every five years following the last stack test; or

ii. above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

d. For the purposes of determination of compliance with condition a., the contribution of particulate matter emissions from the refiner and forehearth are assumed to be:

PM (filterable)	10% of the total furnace PM(filterable) emissions
PM (condensable)	10% of the total furnace PM(condensable) emissions

These emission factors may be revised administratively pending final review and approval of new source test data submitted to the DAQ.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

e. The Permittee shall maintain production records such that the process rates "P" can be derived as specified above, and shall make these records available to the DAQ upon request. The records shall include:
i. the date and approval status of the most recent source test conducted pursuant to condition c. above;
ii. the production rate at which the source test was conducted; and
iii. the maximum production rate achieved since the most recent source test conducted pursuant to condition c. above.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas or propane in this source.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the furnace (melter, refiner and forehearth) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

c. To assure compliance, once a week the Permittee shall observe the emission points from the furnace refiner and forehearth for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in condition a. above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

d. The results of the observed opacity monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

State Enforceable Only

4. Pursuant to NCGS 143-215.108(c) and as required by the Special Order of Consent (SOC) (2002-002):

a. filterable particulate matter emissions from the melter section of furnace 525 (**ID No. 525M**) shall be less than 1.0 pounds per ton of glass produced.

Testing

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

Monitoring/Recordkeeping/Reporting

c. The Permittee shall determine compliance with the filterable PM emissions limitation via the testing requirements in condition 2.1.E.1 (2D .0515 testing requirements).

5. 15A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. To comply with this permit and avoid the applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, emissions from the furnace (ID No. 525), including the melter, refiner, and forehearth, shall not exceed the following limitations:

Pollutant	Emissions Limitation
sulfur dioxide	164.69 tons per consecutive 12-month period
particulate matter	81.63 tons per consecutive 12-month period
PM-10	71.63 tons per consecutive 12-month period
nitrogen oxides	100 tons per consecutive 12-month period
carbon monoxide	114.55 tons per consecutive 12-month period

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. The Permittee shall record monthly the emissions of pollutants listed in condition a. above from the melter, refiner, and forehearth. Monthly emissions shall be based on the actual production rate of the furnace multiplied by an emission factor determined during the last annual testing of furnace 525. The Permittee shall maintain each monthly record on file for a minimum of five (5) years. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the above records are not kept or if any of the pollutant emissions exceed their respective limit stated in condition a. above.

Reporting [15A NCAC 2Q .0508(f)]

d. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall contain the following:

i. The monthly emissions for each pollutant listed in condition a. for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

F. The following furnace:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Double level fiberglass furnace No. 526, using only EFB technology, consisting of the following:			
526M **NSPS**	natural gas / propane direct oxygen fired melter with 2400 kW electric boost (20,000 pounds per hour maximum allowable glass pull rate)	NA	NA
526R	natural gas / propane-fired refiner	NA	NA
526F	natural gas / propane-fired forehearth	NA	NA

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter (from melter, refiner, and forehearth)	$E = 4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
visible emissions	20 percent opacity	15A NCAC 2D .0521
Fluorides	**Melter only**, **State Enforceable Only** 0.45 pounds per ton of glass pulled (annual basis) See Section 2.2.D.1.	NCGS 143-215.108(c)
Particulate matter (filterable only)	**Melter only** (ID No. 526M) 1.0 pounds per ton of glass produced	15A NCAC 2D .0524 (NSPS Subpart CC)
sulfur dioxide	114.37 tons per consecutive 12-month period	15A NCAC 2Q .0317 (PSD avoidance)
fluorides	222.04 tons per consecutive 12-month period	
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.1.	15A NCAC 2D .1100
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.2.	15A NCAC 2Q .0711
Multiple pollutants	Testing, recordkeeping and reporting	15A NCAC 2D .0530 (u)

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from the melter, refiner, and forehearth combined shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$

Where E = allowable emission rate in pounds per hour; and
P = process weight in tons per hour

Liquid and gaseous fuels, combustion air and stoichiometric combustion oxygen are not considered as part of the process weight.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above on an annual basis by testing the fiberglass furnace melter (**ID No. 526M**) in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ.

i. The Permittee satisfied the initial testing requirement on January 28, 2015.

If the results of this test, in conjunction with condition d. below, are

i. less than 80 percent of the emission limit in condition a. above, the Permittee shall be required to stack test once every five years following the last stack test; or

ii. above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

d. For the purposes of determination of compliance with condition a., the contribution of particulate matter emissions from the refiner and forehearth are assumed to be:

PM (filterable)	10% of the total furnace PM(filterable) emissions
PM (condensable)	10% of the total furnace PM(condensable) emissions

These emission factors may be revised administratively pending final review and approval of new source test data submitted to the DAQ.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

e. The Permittee shall maintain production records such that the process rates "P" can be derived as specified above, and shall make these records available to the DAQ upon request. The records shall include:

i. the date and approval status of the most recent source test conducted pursuant to condition d. above;

ii. the production rate at which the source test was conducted; and

iii. the maximum production rate achieved since the most recent source test conducted pursuant to condition d. above.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

f The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas and propane in these sources.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS (Refiner and Forehearth)

a. Visible emissions from the furnace (refiner and forehearth only) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

c. To assure compliance, once a week the Permittee shall observe the emission points from the furnace refiner and forehearth for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in condition a. above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

d. The results of the observed opacity monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS (Melter)

a. Visible emissions from the fiberglass furnace melter, (**ID No. 526M**) shall not be more than **20 percent opacity** when averaged over a six-minute period. [15A NCAC 02D .0521(c)]

b. For sources required to install, operate, and maintain continuous opacity monitoring systems (COMS), compliance with the 20 percent opacity limit shall be determined as follows:[15A NCAC 02D .0521(g)]

   i. No more than four six-minute periods shall exceed the opacity standard in any one day; and

   ii. The percent of excess emissions (defined as the percentage of monitored operating time in a calendar quarter above the opacity limit) shall not exceed 0.8 percent of the total operating hours. If a source operates less than 500 hours during a calendar quarter, the percent of excess emissions shall be calculated by including hours operated immediately previous to this quarter until 500 operational hours are obtained.

Excess emissions during startup and shutdown shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 02D .0535(g). Excess emissions during malfunctions shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 02D .0535(c).

All periods of excess emissions shall be included in the determinations in paragraphs b.i. and b.ii above until such time that the excess emissions are exempted according to the procedures in 02D .0535.

Testing [15A NCAC 2Q .0508(f)

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

d. The Permittee shall use a continuous opacity monitor system (COMS) to monitor and record opacity from the melter. The COMS shall be calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and 15A NCAC 02D .0613.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the monitoring is not performed, if the monitored values exceed the limitations given in conditions a. and b. above, or if the records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit the COMS data in accordance with the reporting requirements given in condition **2.1.F.6.k.** (Subpart CC reporting requirements). All instances of excess emissions with respect to 15A NCAC 02D .0521 must be clearly identified.

5. 15A NCAC 2D. 0530(u): USE OF PROJECTED ACTUAL EMISSIONS TO AVOID APPLICABILITY OF PREVENTION OF SIGNIFICANT DETERIORATION REQUIREMENTS

a. The Permittee has used projected actual emissions to avoid applicability of Prevention of Significant Deterioration requirements for a project consisting of modifications to Furnace 526 and appurtenant equipment and is fully described in application no. 2300153.14A.

In order to verify the assumptions used in the projected actual emissions calculations, the Permittee shall comply with the testing, record keeping and reporting requirements in conditions b. through e. below.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ.

Recordkeeping [15A NCAC 2D .0530(u)]

c. The Permittee shall maintain records of actual emissions for total PM, PM_{10}, $PM_{2.5}$, nitrogen oxides, sulfur dioxide, carbon monoxide, VOCs, fluorides and lead in tons per year on a calendar year basis for five years following the resumption of regular operations upon commencement of the modifications described in application no. 2300153.14A.

d. The reported actual emissions (post-construction emissions) of the 526 melter for each of the five years will be compared to the projected actual emissions (pre-construction projection) for the 526 melter as included below:

Pollutant	Projected Actual Emissions* (tons per year)
PM	98.36
PM_{10}	81.33
$PM_{2.5}$	73.19
SO_2	15.71
NOx	98.11
Carbon Monoxide	21.90
VOCs	1.62
Fluorides	5.78
Lead	1.47e-04

* These projections are not enforceable limitations. If projected emissions are exceeded, consistent with 15A NCAC 2D .0530, the permittee shall include in its annual report an explanation as to why the actual rates exceeded the projection.

The Permittee shall make the information, documented and maintained in this condition available to the Director or the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii).

Reporting [15A NCAC 2D .0530(u)]

e. The Permittee shall submit a report for tot total PM, PM_{10}, $PM_{2.5}$, nitrogen oxides, sulfur dioxide, carbon monoxide, VOCs, fluorides and lead to the Director within 60 days after the end of each calendar year during which the records in condition d. must be generated. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c).

6. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS

a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart CC, including Subpart A "General Provisions."[15A NCAC 02D .0524]

Emission Limitations [15A NCAC 02D .0524, 40CFR 60.293(b)**]**

b. The filterable particulate matter emissions from the furnace melter (ID No. 526M) shall not exceed **1.0 pound per ton of glass produced.**

Testing [15A NCAC 02Q .0508(f), 40 CFR 60.293(f)]

c. The Permittee shall demonstrate compliance with the emission limit in condition b. above on an annual basis by testing the fiberglass furnace melter in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ.
   i. The Permittee satisfied the initial testing requirement on January 28, 2015.

   If the results of this test are:
   i. less than 80 percent of the emission limit in condition b. above, the Permittee shall be required to stack test once every five years following the last stack test; or
   ii. above the limit given in condition b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

Monitoring [15A NCAC 02Q .0508(f), 40 CFR 60.13 and 60.293]

d. The Permittee shall use a continuous opacity monitor system (COMS) to monitor and record opacity from the furnace melter. The COMS shall be calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications", 40 CFR 60.13 and 15A NCAC 02D .0613.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if any three-hour block average opacity value, excluding periods of startup, shut down, malfunction from the furnace melter exceeds **6.4 percent opacity**.

   The three-hour block average opacity limit above was established by using the three 1-hour average opacity values from the compliance stack test and determining the 99% Upper Confidence Limit (UCL) of the three 1-hour averages. The resultant three-hour opacity UCL value was then pro-rated to the NSPS particulate limit (1.0 pounds of PM per ton of glass pulled), by using the average PM emission value determined during the compliance stack test.

   A three-hour block average opacity value shall be calculated as the arithmetic average of any and all valid six-minute averages within the three-hour period. A three-hour period means a 180- minute period commencing at 12am, 3am, 6am, 9am, 12pm, 3pm, 6pm, and 9pm each day. Valid six-minute averages are calculated per 40 CFR 60.13.

   The Permittee may at anytime, reestablish, through administratively amending this permit consistent with 15A NCAC 02Q .0500, the three-hour block average opacity values contained in condition d. above.

e. For the purposes of 40 CFR 60.293(c)(5) and 60.7, Excess Emissions are defined as all of the 6-minute periods during which the average opacity of the emissions from the furnace melter (ID No. 526M) exceed the 99% UCL values determined from a compliance stack test as provided in 40 CFR 60.293(e) as presented below:

   i. **5.2 percent opacity** when firing natural gas/propane.

   The Permittee may at any time, consistent with the provisions of 40 CFR 60.293(e), reestablish, through administratively amending this permit consistent with 15A NCAC 02Q .0500, the UCL values contained in condition e. above.

f. The Permittee shall calculate the Percent Excess Emissions and the Percent COMS Downtime using the equations listed below:

Percent Excess Emissions (%EE):

$$\%EE = \frac{Duration\ of\ Excess\ Emissions - Duration\ of\ Excess\ Emissions\ During\ StartUp/\ ShutDown/\ Malfunction/}{Furnace\ Operating\ Time - Duration\ of\ StartUp\ Shutdown/\ Malfunction/} * 100\%$$

Percent COMs Downtime (%CD):

$$\%CD = \frac{COMs\ Downtime}{Furnace\ Operating\ Time} * 100\%$$

Where:

Excess Emissions	=	*Defined in paragraph e.*
Duration of Excess Emissions	=	*Summation of the excess emissions in hours during the given calendar three-month period*
Duration of Excess Emissions During StartUp/ ShutDown/ Malfunction	=	*Summation of the excess emissions in hours occurring during all periods of startup/shutdown/malfunction during the given calendar three-month period*
*Furnace Operating Time**	=	*Summation of the operation time of the source in hours during the given calendar three-month period*
Duration of StartUp/ ShutDown/ Malfunction	=	*Summation of the operation time of the source in hours occurring during all periods of startup/shutdown/malfunction during the given calendar three-month period*
*COMs downtime***	=	*Summation of time in hours during which the COMs is not operational and concurrent with the Furnace Operating Time during the given calendar three-month period*

* If the furnace operates less than 500 hours during any calendar three-month period, the Permittee may perform the above calculations using all of the operating data for the current calendar three-month period and the most recent data for the proceeding calendar three-month period until 500 hours of data are obtained. [N.C.G.S. 143-215.110]

** Quality assurance (QA) activities will be included in this calculation unless exempt by regulation or defined in an agency approved Quality Assurance (QA) Manual. The amount of exempt QA time will be reported in the report per condition k.

Acceptable Operation and Maintenance [15A NCAC 02D .0524, 40CFR 60.293(c)]

g. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the Percent Excess Emissions from the fiberglass furnace melter exceeds **3 percent** or if the Percent COMS Downtime exceeds **3 percent** in any calendar three-month period (January through March, April through June, July through September October through December).

Recordkeeping [15A NCAC 02Q .0508(f)]

h. Pursuant to 40 CFR 60.7(b), the Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

i. Pursuant to 40 CFR 60.7(f), the Permittee shall maintain records of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; recorded in a permanent form suitable for inspection. The records shall be retained for at least two years following the date of such measurements,

maintenance, reports, and records.

j. The Permittee shall record and maintain records of:

i. Furnace operating time;
ii. Three-hour block average opacity values.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the recordkeeping requirements in conditions h. through j. are not met.

Reporting [15A NCAC 02Q .0508(f)]

k. On a quarterly basis, the Permittee shall:

i. Submit a report containing Percent Excess Emissions, Percent COMs Downtime, and Furnace Operating Time, as defined in condition f. above

ii. pursuant to 40 CFR 60.293(c)(5) and 40 CFR 60.7(c), submit an excess emissions and monitoring system performance summary report. The report shall contain the information required per 40 CFR 60.7(c) and (d).

iii. submit a report of the three-hour block average opacity values, as defined in condition d., that exceed **6.4 percent opacity**.

The quarterly reports, acceptable to the Regional Air Quality Supervisor, shall be postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September.

G. The following sources:

Table 2.1.G.1.

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESDC116(silo #5)	One raw material storage silo (34 tons/hr nominal process rate)	DC116(silo#5), DC117(silo#5)	bagfilter (10:1 gas-to-cloth ratio) in parallel with bagfilter (10:1 gas-to-cloth ratio)
ESDC118(silo #6)	One raw material storage silo (34 tons/hr nominal process rate)	DC118(silo #6), DC131(silo #6)	bagfilter (10:1 gas-to-cloth ratio) in parallel with bagfilter (10:1 gas-to-cloth ratio
ESDC127(silo #14)	One raw material storage silos (34 tons/hr nominal process rate)	DC127(silo #14)	Cartridge filter (150 square feet of filter area)
ESDC153(silo #15)	One raw material storage silos (34 tons/hr nominal process rate)	DC153(silo #15)	One baghouse (10:1 gas-to-cloth ratio)
ESDC132(silo #18)	One raw material storage silo (34 tons/hr nominal process rate each)	DC132(silo #18), DC133(silo #18)	bagfilter (10:1 gas-to-cloth ratio) in parallel with bagfilter (10:1 gas-to-cloth ratio)
ESDC134(silo #19)	One raw material storage silo (34 tons/hr nominal process rate)	DC134(silo #19), DC135(silo #19)	Cartridge filter (150 square feet of filter area) in parallel with Cartridge filter (150 square feet of filter area)
ESDC112(silo #1), ESDC113(silo #2), ESDC114(silo #3), ESDC115(silo #4), ESDC124(silo #11), ESDC125(silo #12), ESDC126(silo #13), ESDC154(silo #16)	Eight raw material storage silos (34 tons/hr nominal process rate each)	DC112,(silo #1), DC113(silo #2), DC114(silo #3), DC115(silo #4), DC124(silo #11), DC125(silo #12), DC126(silo #13), DC154(silo #16)	Eight baghouses (10:1 gas-to-cloth ratio each)

Table 2.1.G.2.

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
525FBSB#1 525FBSB#2	Two furnace batch storage bins serving furnace 525 (10.3 tons/hr nominal process rate each)	DC100, DC101	Two cartridge filters (1,080 square feet of filter area , each)
524FBSB#1 524FBSB#2	Two furnace batch storage bins serving furnace 524 (30 tons/hr nominal process rate each)	DC102, DC103	Two baghouses (10:1 gas-to-cloth ratio each)
520FBSB#1 520FBSB#2	Two furnace batch storage bins serving furnace 520 (10 tons/hr nominal process rate each)	DC104, DC105	Two baghouses (10:1 gas-to-cloth ratio each)

Table 2.1.G.3.

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
526MBSB#1, 526MBSB#2	Two mixed batch storage bins serving furnace 526 (12.2 tons/hr nominal process rate each)	DC382, DC383	Two baghouses (5.3:1 gas-to-cloth ratio each)
EPDC129	One batch storage bin (13 tons/hr nominal process rate) serving furnace 526	DC129	One baghouse (8:1 gas-to-cloth ratio)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$ for $P \leq 30$ tons/hr $E = 55.0 P^{0.11} - 40$ for $P > 30$ tons/hr where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
visible emissions	20 percent opacity each	15A NCAC 2D .0521
particulate matter	23.04 tons per consecutive 12-month period combined total **Table 2.1.G.1** 1.05 tons per consecutive 12-month period each **Table 2.1.G.2**	15A NCAC 2D .0530 (PSD avoidance)

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from each of these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$E = 4.10 * (P)^{0.67}$ for $P \leq 30$ tons/hr, or
$E = 55.0 * (P)^{0.11} - 40$ for $P > 30$ tons/hr

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour
Liquid and gaseous fuels and combustion air are not considered as part of the process weight

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 G. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. Particulate matter emissions from the above listed emission sources shall be controlled by their respective filter systems. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. an annual visual inspection of the system ductwork and material collection unit for leaks; and
   ii. an annual (for each 12 month period following the initial inspection) internal inspection of the filter system's structural integrity.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and filter systems are not inspected and maintained.

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the filter systems; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.

f. The Permittee shall submit a summary report of monitoring, recordkeeping, and testing activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the above listed emission sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

c. To assure compliance, once a month the Permittee shall observe the emission points from the above listed emission sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in condition a. above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

d. The results of the monitoring shall be maintained in a log (written or electronic format) on-site and made available to an authorized representative upon request. The log shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to avoid the applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, the combined total of particulate matter emissions from the sources listed in Table 2.1.G.1. shall not exceed 23.04 tons per consecutive 12-month period.

In order to avoid the applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, the particulate matter emissions from the sources listed in Table 2.1.G.2 shall not exceed 1.05 tons per consecutive 12-month period each.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. Monitoring/recordkeeping requirements in Section 2.1 G. 1. c. and d. shall be sufficient to assure compliance with 15A NCAC 2D .0530. If the requirements of Section 2.1 G. 1. c. and d. are not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Reporting [15A NCAC 2Q .0508(f)]

d. Reporting requirements in Section 2.1 G. 1. e. and f. shall be sufficient to assure compliance with 15A NCAC 2D .0530.

H. The following sources:

Table 2.1.H.1.

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESDC119 (silo #7), ESDC120 (silo #8), ESDC123 (silo #10)	Three batch storage silos (34 tons/hr nominal process rate each)	DC119(silo#7), DC120(silo#8), DC123, DC152(silo#10)	Four baghouses (10:1 gas-to-cloth ratio each), two installed on silo #10, and one on silo #7 and silo #8
ESDC121 (silo #9),	One batch storage silo (34 tons/hr nominal process rate)	DC121, DC122 (silo#9)	Cartridge filter (150 square feet of filter area) in parallel with Cartridge filter (150 square feet of filter area

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
visible emissions	20 percent opacity each	15A NCAC 2D .0521
particulate matter	7.45 tons per consecutive 12-month period combined total	15A NCAC 2D .0530

1. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the above listed emissions sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

c. To assure compliance, once a month the Permittee shall observe the emission points from these sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 H. 1.a. above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and

iii. the results of any corrective actions performed.
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. To comply with 15A NCAC 2D .0530 "Prevention of Significant Deterioration," Best Available Control Technology (BACT) limit for particulate matter emissions from the sources listed in Table 2.1.H.1. shall not exceed 7.45 tons per consecutive 12-month period combined total.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. Particulate matter emissions from the sources listed in Table 2.1.H.1shall be controlled by their respective filter systems. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. an annual visual inspection of the system ductwork and material collection unit for leaks; and
   ii. an annual (for each 12 month period following the initial inspection) internal inspection of the filter system's structural integrity.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the ductwork and filter systems are not inspected and maintained.

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the filter systems; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit the results of any maintenance performed on the filter systems within 30 days of a written request by the DAQ.

f. The Permittee shall submit a summary report of monitoring, recordkeeping, or testing activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

I. The following sources:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES378	One natural gas-fired in-line dryer supporting furnace 526 (2,400 dry lbs/hr nominal production rate)	EC378	One venturi scrubber (45 gallons per minute liquid injection rate)
ES381	One natural gas-fired in-line dryer supporting furnace 526 (1,500 dry lbs/hr nominal production rate)	EC381	One venturi scrubber (45 gallons per minute liquid injection rate)
ES379 ES380	Two natural gas-fired in-line dryers supporting furnace 526 (2,100 dry lbs/hr nominal production rate each)	EC379 EC380	One venturi scrubber (45 gallons per minute liquid injection rate) installed on each dryer

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$ for $P \leq 30$ tons/hr $E = 55.0 P^{0.11} - 40$ for $P > 30$ tons/hr where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
sulfur dioxide	2.3 lbs/million Btu each	15A NCAC 2D .0516
visible emissions	20 percent opacity each	15A NCAC 2D .0521
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.1.	15A NCAC 2D .1100
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.2.	15A NCAC 2Q .0711

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$E = 4.10 * (P)^{0.67}$ for $P \leq 30$ tons/hr, or
$E = 55.0 * (P)^{0.11} - 40$ for $P > 30$ tons/hr

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. Particulate matter emissions from the above listed emission sources shall be controlled by their respective

cyclones and wet scrubbers. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

i. a monthly external visual inspection of the system ductwork and material collection unit for leaks;
ii. an annual inspection of cyclone's structural integrity;
iii. an annual inspection of spray nozzles and packing materials, and perform maintenance and repair when necessary to assure proper operation of the wet scrubbers; and
iv. an annual inspection, cleaning, and calibration of all associated instrumentation.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the cyclones and wet scrubbers are not inspected and maintained.

d. The Permittee shall install, operate, and maintain a scrubbing liquid flowmeter on each wet scrubber. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the scrubbing liquid flow rate for each wet scrubber is not maintained above the above prescribed limits or the scrubbing liquid flow meter is not installed and operated.

Recordkeeping [15A NCAC 2Q .0508(f)]

e. The results of any inspection and maintenance, and monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the scrubbing liquid flow rate for each scrubber once a week at a minimum;
   iii. the results of each inspection;
   iv. the results of any maintenance performed on each cyclone and wet scrubber; and
   v. any variance from manufacturer's recommendations, if any, and corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

f. Within 30 days of a request from the DAQ, the Permittee shall submit a report of any maintenance performed on the cyclone and wet scrubber.
g. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions when burning natural gas in these sources.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for visible emissions from these sources.

J. Reserved

K. The following source:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES97	One binder mix room ventilation (12,000 lbs/hr nominal process rate)	97EC	One cartridge filter (3,048 square feet of filter area)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$ for $P \leq 30$ tons/hr $E = 55.0 P^{0.11} - 40$ for $P > 30$ tons/hr where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521
volatile organic compounds	See Section 2.2 B.1.	15A NCAC 2D .0958
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.1.	15A NCAC 2D .1100
toxic air pollutants	**State Enforceable Only** See Section 2.2 C. 2.	15A NCAC 2Q .0711

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$E = 4.10 * (P)^{0.67}$ for $P \leq 30$ tons/hr, or
$E = 55.0 * (P)^{0.11} - 40$ for $P > 30$ tons/hr

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour
Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. Particulate matter emissions from the above listed emission sources shall be controlled by the cartridge filter. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
   ii. an annual (for each 12 month period following the initial inspection) internal inspection of the cartridge

filter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and cartridge filter are not inspected and maintained.

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the cartridge filter; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit the results of any maintenance performed on the cartridge filter within 30 days of a written request by the DAQ.

f. The Permittee shall submit a summary report of monitoring, recordkeeping, or testing activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the emission source shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

c. To assure compliance, once a month the Permittee shall observe the emission points from the source for any visible emissions above normal. The Permittee shall establish "normal" for the source by January 10, 2005. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in condition a. above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

L. The following source:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESCC96	One caustic brush cleaning system (2,600 lbs/hr nominal process rate)	CDWS96	One packed cross-flow scrubber (34 gallons per minute liquid injection rate)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$ for $P \leq 30$ tons/hr $E = 55.0 P^{0.11} - 40$ for $P > 30$ tons/hr where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521
volatile organic compounds	See Section 2.2 B.1.	15A NCAC 2D .0958

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

E = 4.10 * (P) 0.67 for P < 30 tons/hr, or
E = 55.0 * (P) 0.11 -40 for P >30 tons/hr

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. Particulate matter emissions from the above listed emission source shall be controlled by the wet scrubber. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly external visual inspection of the system ductwork and material collection unit for leaks;
   ii. an annual inspection of spray nozzles and packing materials, and perform maintenance and repair when necessary to assure proper operation of the wet scrubber; and
   iii. an annual inspection, cleaning, and calibration of all associated instrumentation.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the wet scrubber is not inspected and maintained.

d. The Permittee shall install, operate, and maintain a scrubbing liquid flowmeter on the wet scrubber. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the scrubbing liquid flow rate is not

maintained above the above prescribed limit or the scrubbing liquid flow meter is not installed and operated.

Recordkeeping [15A NCAC 2Q .0508(f)]

e. The results of any inspection and maintenance, and monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the scrubbing liquid flow rate for wet scrubber once a week at a minimum;
   iii. the results of each inspection;
   iv. the results of any maintenance performed on wet scrubber; and
   v. any variance from manufacturer's recommendations, if any, and corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

f. Within 30 days of a request from the DAQ, the Permittee shall submit a report of any maintenance performed on the wet scrubber.

g. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for visible emissions from this source.

M. The following engines:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESDG85, ESDG86 ESDG88A, ESDG88B **MACT Subpart ZZZZ**	Four diesel-fired emergency generators (two 1200 hp each and two 1800 hp each)	NA	NA

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
visible emissions	20 percent opacity each (ID Nos. ESDG88A and ESDG88B) 40 percent opacity each (ID Nos. ESDG85 and ESDG86)	15A NCAC 2D .0521
nitrogen oxide	40 tons per consecutive 12-month period	15A NCAC 2D .0530 (PSD Avoidance)
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.1.	15A NCAC 2D .1100
hazardous air pollutants	No monitoring, recordkeeping, reporting or notification requirements.	15A NCAC 2D .1111 [40 CFR Part 63, Subpart ZZZZ]

1. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of diesel fuel in these sources.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the emissions sources (ID Nos. ESDG88A and ESDG88B) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

b. Visible emissions from the emissions sources (ID Nos. ESDG85 and ESDG86) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 2D .0521(c)]

Testing [15A NCAC 2Q .0508(f)]

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in

noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

d. No monitoring/recordkeeping is required for visible emissions from the firing of diesel fuel oil for these sources.

3. 15A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. To comply with this permit and avoid the applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, nitrogen oxide emissions from these sources shall not exceed 40 tons per consecutive 12-month period.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

c. In order to ensure compliance with the above limit, each emergency generator shall be limited to no more than 1000 hours of operation per consecutive 12-month period. The Permittee shall record monthly hours of operation for each emergency generator. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the above records are not kept or if the hours of operation for each emergency generator exceed 1000 hours per consecutive 12-month period.

Reporting [15A NCAC 2Q .0508(f)]

d. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
   i. the monthly hours of operation of each generator for the previous 17 months. The total hours of operation for each generator must be calculated for each of the 12-month periods over the previous 17 months;
   ii. the monthly nitrogen oxide emissions for the previous 17 months. The total nitrogen oxide emissions must be calculated for each of the 12-month periods over the previous 17 months.

4. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.6585, 63.6590(a)(1)(i)]

a. For these emission source(s) (existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart ZZZZ “National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines” and Subpart A “General Provisions.”

Stationary RICE subject to limited requirements [40 CFR 63.6590(b)]

b. Pursuant to 40 CFR 63.6590(b)(3)(iii), these sources do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A, including initial notification requirements.

N. The following boilers:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESB83A **2D .1109 Case-by-Case MACT**	Two natural gas/No. 2 fuel oil fired boiler (25.1 million Btu per hour nominal heat input rate)	NA	NA
ESB83B **2D .1109 Case-by-Case MACT**	Two natural gas/No. 2 fuel oil fired boiler (16.33 million Btu per hour nominal heat input rate)	NA	NA
ESB83C **(MACT 5D)**	Natural gas-fired boiler (0.84 million Btu per hour heat input rate)	NA	NA

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulates	0.40 pound per million Btu heat input each for ESB83A and ESB83B 0.39 pound per million Btu heat input (ESB83C)	15A NCAC 2D .0503
sulfur dioxide	2.3 lbs/million Btu heat input each	15A NCAC 2D .0516
visible emissions	20 percent opacity each	15A NCAC 2D .0521
hazardous air pollutants	Best Combustion Practices (applicable through May 19, 2019) See Section 2.2 A. ***ESB83A and ESB83B only***	15A NCAC 2D .1109 [CAA § 112(j)]
hazardous air pollutants	annual tune up schedule; initial energy assessment (applicable to ESB83A and ESB83B starting May 20, 2019) 2-year tune up schedule; initial energy assessment (applicable to ESB83C upon startup	15A NCAC 2D .1111 [40 CFR 63 Subpart DDDDD]
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.1.	15A NCAC 2D .1100

1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of natural gas and No. 2 fuel oil, that are discharged from these boilers into the atmosphere shall not exceed:
   i. 0.40 pound per million Btu heat input each for ESB83A
   ii. 0.33 pound per million Btu heat input each for ESB83B;
   iii. 0.39 pound per million Btu heat input for ESB83C. [15A NCAC 2D .0503(a)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas and No. 2 fuel oil in these sources.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions when burning natural gas and No. 2 fuel oil in these boilers.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for visible emissions when burning natural gas and No. 2 fuel oil from these sources.

4. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.7485]

a. For the boiler (ID No. ESB83C), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD . "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters".

Definitions and Nomenclature [40 CFR 63.7575]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions [40 CFR 63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Date [40 CFR 63.7495(a)]

d. The Permittee shall comply with the applicable requirements upon startup of the boiler.

General Compliance Requirements [40 CFR 63.7505(a)]

e. The Permittee shall be in compliance with the emission limits and operating limits at all times.

Work Practice Standards [15A NCAC 02Q .0508(f)]

f. The Permittee shall conduct a tune-up of the boiler biennially as specified below.
   i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months);
   ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
   iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly;
   iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available;
   v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made); and

   [40CFR 63.7500(a), 63.7540(a)(11)]

g. Each biennial tune-up shall be conducted no more than 25 months after the previous tune-up. The initial tune-up shall be conducted within 180 days after the initial startup of the source.

   [40CFR 63.7515(e), 63.7510(f)]

h. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within one week of startup.

   [40 CFR 63.7540(a)(12)]

i. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
   [40 CFR 63.7500(a)(3)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the work practice standards

requirements in f. through i. are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f)]

j. The Permittee must keep the following:

i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).

[40 CFR 63.7555(a)(1)]

ii. Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:

(A) The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the boiler;

(B) A description of any corrective actions taken as a part of the combustion adjustment; and

(C) The type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

[40 CFR 63.7540(a)(10)(vi)]

iii. The associated records for conditions f through i.

k. The Permittee must maintain records in a form suitable and readily available for expeditious review as specified in 40 CFR 63.10(b)(1).

[40 CFR 63.7560(a)]

l. As specified in 40 CFR 63.10(b)(1), the Permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 CFR 63.7560(b)]

m. The Permittee must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to 40 CFR 63.10(b)(1). The Permittee can keep the records offsite for the remaining 3 years.

[40 CFR 63.7560(c)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained per conditions j. through m.

Reporting Requirements [15A NCAC 02Q .0508(f)]

n. The Permittee shall submit a compliance report semiannually postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June [40 CFR 63.7550(b)(5)]

o. The compliance report must contain the following information:

i. Company name and address.

ii. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

iii. Date of report and beginning and ending dates of the reporting period.

iv. If there are no instances of noncompliance with the requirements of the work practice requirements in condition f through i above, a statement that there were no instances of noncompliance with the work practice standards during the reporting period.

v. Include the date of the most recent tune-up for each unit required to conduct an biennial tune-up according to **condition f**. Include the date of the most recent burner inspection if it was not done biennially and was delayed until the next scheduled unit shutdown.

[40 CFR 63.7550(a) and (c)]

p. If you have an instance of noncompliance from a work practice standard during the reporting period, the report must contain the following information :

i. The total operating time of each affected source during the reporting period.

ii. A description of the instance of noncompliance and which emission limit or operating limit from which you were in noncompliance.

iii. Information on the number, duration, and cause of the instance of noncompliance (including unknown cause), as applicable, and the corrective action taken.

[40 CFR 63.7550(a) and (d), 63.7540(b), Table 9]

The Permittee shall be deemed in noncompliance with the reporting requirements of 15A NCAC 02D .1111 if the requirements in n. through p. are not met.

5. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.7485, §63.7490(d), §63.7499(l)]

a. For the existing sources(s) designed to burn gas 1 fuels (ID Nos. ESB83A and ESB 83B), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD . "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions."

i. The Permittee shall comply with the CAA §112(j) standard in condition 2.2.A.1 through **May 19, 2019**. The Permittee shall be subject to the requirements of this standard starting May 20, 2019. Note that the requirements of this standard may require action on behalf of the Permittee prior to May 20, 2019.

Definitions and Nomenclature [§63.7575]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

i. The Permittee shall only burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, and during periods of gas curtailment or gas supply interruptions of any duration. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in this condition are not met.

40 CFR Part 63 Subpart A General Provisions [§63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Date [§63.7510(e), §63.56(b)]

d. The Permittee shall complete the initial tune up and the one-time energy assessment no later than May 20, 2019.

Notifications [§63.7545(e)(8), §§63.7530(d), (e), (f)]

e. The Permittee shall submit a Notification of Compliance Status. The notification must be signed by a responsible official and sent before the close of business on the 60th day following the completion of the initial tune up and one time energy assessment (whichever is later). The notification shall contain the following:

i. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned.

ii. the following certification(s) of compliance, as applicable:

A. "This facility complies with the required initial tune-up according to the procedures in.40 CFR 63.7540(a)(10)(i) through (vi)' [i.e., conditions h.i. through h.v. and m. ii.]; and

B. "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)" [i.e., condition l.] and is an accurate depiction of the facility at the time of the assessment.

f. The Permittee shall submit a notification of intent to fire an alternative fuel (i.e., fuel oil) within 48 hours of the declaration of each period of natural gas curtailment or supply interruption. The notification must include the information in §63.7545(f). [§63.7545(f)]

Subcategory Switch Notification [15A NCAC 2Q .0508(f)]

g. If the Permittee switches fuels or makes a physical change to the boiler and the fuel switch or physical change results in the applicability of a different subcategory, the Permittee must provide notice of the date upon which the Permittee switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:
   i. The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.
   ii. The currently applicable subcategory under this subpart.
   iii. The date upon which the fuel switch or physical change occurred.

h. The notification required in condition g. above shall be submitted with a permit application consistent with 15A NCAC 2Q .0500 to update the permit with the requirements for the applicable subcategory under 40 CFR 63 Subpart DDDDD.

General Compliance Requirements [§63.7505(a), §63.7500(f)]

i. The Permittee shall be in compliance with the work practice standards in this subpart. These standards apply at all times the affected unit is operating.

Work Practice Standards [15A NCAC 02Q .0508(f)]

j. The Permittee shall conduct a tune-up of the boiler annually as specified below.
   i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown;
   ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
   iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);
   iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject; and
   v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

   [§§63.7500(a), (e), §63.7540(a)(10)]

k. Each annual tune-up shall be conducted no more than 13 months after the previous tune-up. [40CFR 63.7515(d)]

l. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.
   [§63.7540(a)(13), §63.7515(g)]

m. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
   [§63.7500(a)(3)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in c. through m. are not met.

Energy Assessment Requirements [15A NCAC 02Q .0508(f)]

n. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must address the requirements in 40 CFR 63 Subpart DDDDD, Table 3, with the extent of the evaluation for items (a) to (e) in Table 3 appropriate for the on-site technical hours listed in §63.7575:
   [§63.7500(a)(1), Table 3]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in condition n. are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f), 40 CFR 63.7555]

o. The Permittee shall keep the following:
   i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.7555(a)(1)]
   ii. maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:
      A. the concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the source;
      B. a description of any corrective actions taken as a part of the combustion adjustment; and
      C. the type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

      [40 CFR 63.7540(a)(10)(vi)]
   iii. the associated records for conditions i. through n. including:
      A. the occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment.

      [40 CFR 63.10(b)(2)(ii)]
   iv. records of the calendar date, time, occurrence and duration of each startup and shutdown. [40 CFR 63.7555(i)]
   v. records of the type(s) and amount(s) of fuels used during each startup and shutdown. [40 CFR 63.7555(j)]
   vi. the following records, pursuant to 15A NCAC 2Q .0508(f):
      A. types of fuels combusted during periods of gas curtailment, gas supply interruption, periodic testing maintenance and operator training;
      B. date and duration of periods of gas curtailment and gas supply interruption; and
      C. date and duration of periods of testing, maintenance and operator training while combusting liquid fuel.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the Permittee burns fuel oil outside of periods of gas curtailment and gas supply interruption, except for the combined total of 48 hours during any calendar year allowed for periodic testing, maintenance, or operator training.

p. The Permittee shall:
   i. maintain records in a form suitable and readily available for expeditious review;
   ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
   iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

   [40 CFR 63.7560, 63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as described in conditions o. through p.

Reporting Requirements [15A NCAC 02Q .0508(f)]

q. The Permittee shall submit compliance reports to the DAQ on an annual basis, with the exception that the first report shall cover the period beginning on May 20, 2019 and ending on December 31, 2019. Subsequent annual reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 30.
[§§63.7550(a), (b), 63.10(a)(4), (5)]
   i. This report must also be submitted electronically through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due the report the Permittee submit the report to the at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.7550(h)(3)]

r. The compliance report must contain the following information:
   i. Company name and address;
   ii. Process unit information, emissions limitations, and operating parameter limitations;
   iii. Date of report and beginning and ending dates of the reporting period;
   iv. The total operating time during the reporting period;
   iv. If there are no deviations from the requirements of the work practice requirements in condition j. above, a statement that there were no deviations from the work practice standards during the reporting period; and
   v. Include the date of the most recent tune-up for each unit required according to condition j. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown.
   [40 CFR 63.7550(a) and (c), Table 9]

s. The report must contain a summary of the records required for condition o.vi.

t. If you have a deviation from a work practice standard during the reporting period, the report must contain the following information:
   i. A description of the deviation and which emission limit or operating limit from which you deviated; and
   ii. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.
   [40 CFR 63.7550(a) and (d), 63.7540(b), Table 9]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the reporting requirements in q. through t. are not met.

O. The following sources:

Table 2.1.O

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-1 through, ES-5, ES-7 through ES-11 ES-17 through ES-18	Twelve natural gas-fired fiberglass drying ovens (3.4 million Btu per hour maximum heat input, each)	NA	NA
ES-6, ES-12 ES-19 through ES-21	Five natural gas-fired fiberglass drying ovens (1.5 million Btu per hour maximum heat input, each)	NA	NA
ES-14a, ES-14b, ES-14c, ES-15a, ES-15b, ES-15c,	Six natural gas-fired fiberglass drying ovens (0.92 million Btu per hour maximum heat input, each)	NA	NA
ES-D1 through ES-D4	Four single lane dielectric fiberglass drying oven (1,800 pounds per hour throughput capacity, each)	NA	NA

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$ for $P \leq 30$ tons/hr $E = 55.0 P^{0.11} - 40$ for $P > 30$ tons/hr where E = allowable emission rate in pounds per hour P = process weight in tons per hour **Process stacks only**	15A NCAC 2D .0515
Particulate matter	0.324 lb/million Btu heat input each **Combustion stacks only**	15A NCAC 2D .0503
sulfur dioxide	2.3 lbs/million Btu each **Combustion stacks only**	15A NCAC 2D .0516
visible emissions	40 percent opacity each for seventeen drying ovens 20 percent opacity each for ten drying ovens	15A NCAC 2D .0521
toxic air pollutants	**State Enforceable Only** See Section 2.2 C.1.	15A NCAC 2D .1100
toxic air pollutants	**State Enforceable Only** See Section 2.2 C. 2.	15A NCAC 2Q .0711
HAPs	Best Combustion Practices (applicable through May 19, 2019) See Section 2.2 A. Excluding dielectric fiberglass drying ovens (ID No. ES-D1 through D4)	15A NCAC 2D .1109 (CAA § 112(j))
HAPs	5-year tune up schedule; initial energy assessment (applicable starting May 20, 2019)	15A NCAC 2D .1111 (40 CFR 63 Subpart 5D)

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from the process stacks of these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

E = 4.10 * (P) 0.67 for P < 30 tons/hr, or
E = 55.0 * (P) 0.11 -40 for P >30 tons/hr

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour
Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. The Permittee shall maintain production records sufficient to determine process weight rate and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

d. The Permittee shall submit a summary report of monitoring, recordkeeping, or testing activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from the natural gas-fired fiberglass drying ovens (combustion stacks) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions when burning natural gas in these drying ovens.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from natural gas-fired fiberglass drying ovens (combustion and process stacks) (ID Nos. ES-1 through ES-12, and ES-17 through ES-21) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 2D .0521 (c)]

b. Visible emissions from natural gas-fired fiberglass drying ovens (combustion and process stacks) (ID Nos. ES-14a, ES-14b, ES-14c, ES-15a, ES-15b, and ES-15c) and dielectric fiberglass drying ovens (ID Nos. ES-D1 through ES-D4) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 2Q .0508(f)]

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in conditions. a. or b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

d. To assure compliance, once a month the Permittee shall observe the emission points from the drying ovens (process stacks) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from the drying ovens are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 2D .2610 (Method 9) for 12 minutes is below the limit given in conditions. a. or b. above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

e. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

f. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

g. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in these sources (combustion stacks).

4. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of natural gas, that are discharged from these sources into the atmosphere shall not exceed 0.324 pound per million Btu heat input each. [15A NCAC 2D .0503(a)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

Monitoring/Recordkeeping/Reporting

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in these sources.

5. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.7485, .7490(d), .7499(l)]

a. For the existing sources(s) designed to burn gas 1 fuels (all sources in table 21.O above excluding ES-D1- through ES-D4), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD . "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions."

i. The Permittee shall comply with the CAA §112(j) standard in condition 2.2.A.1 through **May 19, 2019**. The Permittee shall be subject to the requirements of this standard starting May 20, 2019. Note that the requirements of this standard may require action on behalf of the Permittee prior to May 20, 2019.

Definitions and Nomenclature [40 CFR 63.7575]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions [40 CFR 63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Date [40 CFR 63.7510(e), 63.56(b)]

d. The Permittee shall complete the initial tune up and the one-time energy assessment no later than May 20, 2019.

Notifications [40 CFR 63.7545(e)(8), 63.7530(d),(e),(f)]

e. The Permittee shall submit a Notification of Compliance Status. The notification shall contain the following:
   i. a description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned.
   ii. the following certification(s) of compliance, as applicable:
      A. "This facility complies with the required initial tune-up according to the procedures in.40 CFR 63.7540(a)(10)(i) through (vi)' [i.e condition g.i. through g.v. and m. i.]; and
      B. "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)" [i.e., condition k.] and is an accurate depiction of the facility at the time of the assessment.

   The notification must be signed by a responsible official and sent before the close of business on the 60th day following the completion of the initial tune up and one time energy assessment (whichever is later).

General Compliance Requirements [40 CFR 63.7505(a), 63.7500(f)]

f. The Permittee shall be in compliance with the work practice standards in this subpart. These standards apply at all times the affected unit is operating.

Work Practice Standards [15A NCAC 02Q .0508(f)]

g. The Permittee shall conduct a tune-up of the process heater every five years as specified below.
   i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months
   ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
   iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown)'
   iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject.
   v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

   [40CFR 63.7500(a), (e), 63.7540(a)(10), (a)(12)]

h. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. [40CFR 63.7515(d)]

i. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.
   [40 CFR 63.7540(a)(13), 63.7515(g)]

j. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
   [40 CFR 63.7500(a)(3)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in f. through j. are not met.

Energy Assessment Requirements [15A NCAC 02Q .0508(f)]

k. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must include the following items, with the extent of the evaluation for items (i) to (v) appropriate for the on-site technical hours listed in 40 CFR 63.7575:
   i. A visual inspection of the boiler or process heater system;
   ii. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.;
   iii. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.;
   iv. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;
   v. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified;
   vi. A list of cost-effective energy conservation measures that are within the facility's control; and
   vii. A list of the energy savings potential of the energy conservation measures identified
   ix . A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

   [40 CFR 63.7500(a)(1), Table 3]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in condition k. are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f), 40 CFR 63.7555]

l. The Permittee shall keep the following:

i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).

[40 CFR 63.7555(a)(1)]

ii. Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:

(A) The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the source;
(B) A description of any corrective actions taken as a part of the combustion adjustment; and
(C) The type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

[40 CFR 63.7540(a)(10)(vi)]

iii. The associated records for conditions f. through l. including:

(A) the occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment.

[40 CFR 63.10(b)(2)(ii)]

iv. maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

[40 CFR 63.7555(i)]

v. maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

[40 CFR 63.7555(j)]

m. The Permittee shall:

i. maintain records in a form suitable and readily available for expeditious review;

ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and

iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

[40 CFR 63.7560, 63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as described in conditions l. through m.

Reporting Requirements [15A NCAC 02Q .0508(f)]

n. The Permittee shall submit compliance reports to the DAQ on a 5-year basis. The first report shall cover the period beginning on the compliance date specified in condition d. and ending on the earliest December 31st following a complete 5-year period. Subsequent 5-year reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 31.
40 CFR 63.7550(a), (b)

i. This report must also be submitted electronically through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due the report the Permittee submit the report to the at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.7550(h)(3)]

o. The compliance report must contain the following information:

i. Company name and address;

ii. Process unit information, emissions limitations, and operating parameter limitations;

iii. Date of report and beginning and ending dates of the reporting period;

iv. The total operating time during the reporting period;

iv. If there are no deviations from the requirements of the work practice requirements in condition g. above, a statement that there were no deviations from the work practice standards during the reporting period; and

v. Include the date of the most recent tune-up for each unit required according to condition g. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown.

[40 CFR 63.7550(a) and (c), Table 9]

p. If you have a deviation from a work practice standard during the reporting period, the report must contain the following information:

i. A description of the deviation and which emission limit or operating limit from which you deviated; and

ii. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

[40 CFR 63.7550(a) and (d), 63.7540(b), Table 9]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the reporting requirements in n. through p. are

P. The following emergency engines:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESDP366	Process Water (Return), Emergency Diesel fuel-fired Pump 524 (115 BHP)	NA	NA
ESDP89	Process Water (Supply) Emergency Diesel fuel-fired Pump 524 (325 BHP)	NA	NA
ESDP90	Process Water (Supply) Emergency Diesel fuel-fired Pump 525 (290 BHP)	NA	NA
ESDP91	Process Water (Return) Emergency Diesel fuel-fired Pump 525 (115 BHP)	NA	NA
ESDP92	Process Water GM Emergency Diesel fuel-fired Pump Loop 1&2 (Supply) (250 BHP)	NA	NA
ESDP94	Process Water (Return) Emergency Diesel fuel-fired Pump 526 (125 BHP)	NA	NA
ES-FP1	Emergency Diesel fuel-fired Fire Pump (250 BHP)	NA	NA
ES-CAEB524	Emergency Natural Gas-fired Blower 524 (150 BHP)	NA	NA
ES-CAEB525	Emergency Natural Gas-fired Blower 525 (150 BHP)	NA	NA
ES-CAEB526	Emergency Natural Gas-fired Blower 526 (150 BHP)	NA	NA

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
visible emissions	20 percent opacity	15A NCAC 2D .0521
toxic air pollutants	as defined in Section 2.2 C.1. ***State-Enforceable Only*** **(ESDP-89 through -94 and ESDP 366 only)**	15A NCAC 2D .1100
toxic air pollutants	as defined in Section 2.2 C. 2. ***State-Enforceable Only*** **(ESDP-89 through -94 and ESDP 366 only)**	15A NCAC 2Q .0711
hazardous air pollutants	Work practice and recordkeeping requirements.	15A NCAC 2D .1111 [40 CFR Part 63, Subpart ZZZZ]

1. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping is required for sulfur dioxide emissions from the firing of diesel fuel oil for these

sources.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping is required for visible emissions from the firing of diesel fuel oil for these sources.

3. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.6585, 63.6590(a)(1)(ii)]

a. For these emergency stationary reciprocating internal combustion engines (RICE), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, "Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines."

Definitions and Nomenclature

b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 63.6675 shall apply.

Applicability Date [40 CFR 63.6595(a)(1)]

c. The Permittee shall comply with the applicable requirements no later than May 3, 2013.

Notifications [40 CFR 63.6645(a)(5)]

d. The Permittee has no notification requirements.

General Provisions [40 CFR 63.6665]

e. The Permittee shall comply with the General Provisions as applicable pursuant to Table 8 of 40 CFR 63 Subpart ZZZZ

Operating and Maintenance Requirements [15A NCAC 2Q .0508(b)]

f. During periods of startup of the IC engine, the Permittee shall minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[40 CFR 63.6602 and 63.6625(h)]

g. Except during periods of startup of the IC engine, the Permittee shall:

i. Change oil and filter every 500 hours of operation or annually, whichever comes first;

ii. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and

iii. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary

[40 CFR 63.6602, Table 2C]

h. The Permittee shall have the option to utilize the oil analysis program as described in 40 CFR 63.6625(i) in order to extend the specified oil change requirement in condition g. [40 CFR 63.6602, Table 2C,63.6625(i)]

i. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in condition g., or if performing the

management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. [40 CFR 63.6602, Table 2C]

j. The permittee shall be in compliance with the emission limitations and operating limitations in this subpart that apply at all times. [40 CFR 63.6605(a)]

k. The Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]

l. The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e) and 63.6640(a), Table 6]

m. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in these conditions, is prohibited. [40 CF 63.6640(f)(1)]

n. There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CF 63.6640(f)(1)(i)]

o. The Permittee may operate the emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. [40 CFR 63.6640(f)(1)(ii)]

p. The Permittee may operate the emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing.

   i. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level.

   ii. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent.

   iii. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations.

   iv. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph, as long as the power provided by the financial arrangement is limited to emergency power. .

   [40 CF 63.6640(f)(1)(iii)]

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if conditions **f. through p**. are not met.

Monitoring [15A NCAC 2Q .0508(f)]

q. The Permittee shall install a non-resettable hour meter on the IC engine if one is not already installed. [40 CFR 63.6625(f)]

Recordkeeping [15A NCAC 2Q .0508(f)]

r. The Permittee shall keep the following:
   i. A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv).[40 CFR 63.6655(a)(1)]
   ii. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)]
   iii. Records of all required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(4)]
   iv. Records of actions taken during periods of malfunction to minimize emissions in accordance with **condition k**., including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]
   v. Records of the maintenance conducted on the RICE pursuant to **condition l**. [40 CFR 63.6655(d) and (e)]
   vi. Records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The Permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the Permittee shall keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response. [40 CFR 63.6655(f)(1)]

s. The Permittee shall keep each record in a form suitable and readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(a),(b),(c)]

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if conditions **q. through s**. are not met.

Reporting [15A NCAC 2Q .0508(f)]

t. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance must be clearly identified. [40 CFR 63.6640(b),(e), and 63.6650(f)]
   i. The summary report shall also include any reporting required under **condition i**., as necessary. [40 CFR 63.6602, Table 2C]

The Permittee shall be deemed in noncompliance with the reporting requirements of 15A NCAC 2D .1111 if **condition t** is not met.

Q. The following sources:

Table 2.1.Q

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
EPDC160	**Raw material batch house bins identified as follows:	DC160	Cartridge-type filter
EPDC161	Blender A	DC161	Cartridge-type filter
EPDC162	Blender B	DC162	Cartridge-type filter
EPDC163	Silo 17	DC163	Cartridge-type filter
EPDC164	Scale Bin 1	DC164	Cartridge-type filter
EPDC165	Scale Bin 2	DC165	Cartridge-type filter
EPDC166	Scale Bin 3	DC166	Cartridge-type filter
EPDC167	Scale Bin 4A	DC167	Cartridge-type filter
EPDC168	Scale Bin 4B	DC168	Cartridge-type filter
EPDC169	Scale Bin 5	DC169	Cartridge-type filter
EPDC170	Scale Bin 6	DC170	Cartridge-type filter
EPDC171	Scale Bin 7	DC171	Cartridge-type filter
EPDC172	Scale Bin 8	DC172	Cartridge-type filter
EPDC173	Bag Breaker 1	DC173	Cartridge-type filter
EPDC174	Bag Breaker 2	DC174	Cartridge-type filter
EPDC175	Bag Breaker 3	DC175	Cartridge-type filter
EPDC176	Silo 20	DC176	Cartridge-type filter
EPDC177	Scale Bin 11	DC177	Cartridge-type filter
EPDC178	MBSB 1	DC178	Cartridge-type filter
EPDC179	MBSB 2	DC179	Cartridge-type filter
EPDC180	MBSB 3	DC180	Cartridge-type filter
EPDC181	MSBS 6 MBSB7	DC181	Cartridge-type filter
EPDC182	Batch House Central Vacuum System	DC182	Cartridge-type filter (1,860 square feet of filter area)
EPDC183	Batch House Scale Area Vacuum System	DC183	Cartridge-type filter (18,288 square feet of filter area)
EPDC184	Raw Material Batch Bin MBSB5(755 cubic feet storage capacity)	DC184	Cartridge filter (1470 square feet of filter area)
EPDC185	Raw Material Batch Bin MBSB8 (755 cubic feet storage capacity)	DC185	Cartridge filter (1,470 square feet of filter area)
EPDC186	Raw Material Batch Bin MBSB9 (776 cubic feet storage capacity)	DC186	Cartridge filter (1,470 square feet of filter area)
EPDC187	Raw Material Batch Bin MBSB10 (776cubic feet storage capacity)	DC187	Cartridge filter (1,470 square feet of filter area)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521(d)

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$E = 4.10 \times P^{0.67}$ where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. Particulate matter emissions from the sources in Table 2.1.Q shall be controlled by cartridge-type filters as identified in Table 2.1.Q. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
ii. an annual (for each 12 month period following the initial inspection) inspection of the cartridge-type filter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and cartridge-type filters are not inspected and maintained.

d. The results of inspection and maintenance shall be maintained in a log (written or electronic format) on-site and made available to an authorized representative upon request. The log shall record the following:

i. the date and time of each recorded action;
ii. the results of each inspection;
iii. the results of any maintenance performed on the cartridge-type filters; and
iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit the results of any maintenance performed on the cartridge-type filters within 30 days of a written request by the DAQ.

f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the sources identified in Table 2.1.Q shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

c. To assure compliance, once a month when the raw material batch house bins are being filled the Permittee shall observe the emission points for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period when the raw material batch house bins are being filled to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in condition a. above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

d. The results of the monitoring shall be maintained in a log (written or electronic format) on-site and made available to an authorized representative upon request. The log shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained**.**

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

R. The following sources:

Table 2.1.R.

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESWC367a	Remote Wet Cut Line No. 1 (3,500 lbs/hr dry nominal production rate) including a natural gas-fired dryer (3.5 million Btu per hour maximum heat input rate)	CDWC367	Venturi scrubber (80 gallons per minute minimum liquid injection rate)
ESWC368a	Remote Wet Cut Line No. 2 (3,500 lbs/hr dry nominal production rate) including a natural gas-fired dryer (3.5 million Btu per hour maximum heat input rate)	CDWC368	Venturi scrubber (80 gallons per minute minimum liquid injection rate)
ESWC369a	Remote Wet Cut Line No. 3 (3,500 lbs/hr dry nominal production rate) including a natural gas-fired dryer (3.5 million Btu per hour maximum heat input rate)	CDWC369	Venturi scrubber (80 gallons per minute minimum liquid injection rate)
ESWCL370	Remote Wet Cut Line No. 4 (3,000 lbs/hr dry nominal production rate) including a natural gas-fired dryer (3.5 million Btu per hour maximum heat input rate)	CDWC370	Venturi scrubber (80 gallons per minute minimum liquid injection rate each)
ESWCL371	Remote Wet Cut Line No. 5 (3,000 lbs/hr dry nominal production rate) including a natural gas-fired dryer (3.5 million Btu per hour maximum heat input rate)	CDWC371	Venturi scrubber (80 gallons per minute minimum liquid injection rate each)
ESWCL372	Remote Wet Cut Line No. 6 (3,500 lbs/hr dry nominal production rate) including a natural gas-fired dryer (3.5 million Btu per hour maximum heat input rate)	CDWC372	Venturi scrubber (80 gallons per minute minimum liquid injection rate)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
sulfur dioxide	2.3 pounds per million Btu heat input each	15A NCAC 2D .0516
visible emissions	20 percent opacity	15A NCAC 2D .0521
toxic air pollutants	See Section 2.2 C.1. **State Enforceable Only**	15A NCAC 2D .1100
toxic air pollutants	See Section 2.2 C. 2. **State Enforceable Only**	15A NCAC 2Q .0711

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$E = 4.10 \times P^{0.67}$ Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. Particulate matter emissions from these sources shall be controlled as described in **Table 2.1.R**. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

i. a monthly visual inspection of the systems' ductwork and scrubbers for leaks;

ii. an annual (for each 12 month period following the initial inspection) internal inspection of each scrubber's structural integrity.

iii. an annual inspection of spray nozzles, and perform maintenance and repair when necessary to assure proper operation of the scrubbers; and

iv. an annual inspection, cleaning, and calibration of all associated instrumentation.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and scrubbers are not inspected and maintained.

d. The Permittee shall install, operate, and maintain a scrubbing liquid flowmeter on each scrubber. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the scrubbing liquid flow rate for each scrubber is not maintained above the prescribed limits or the scrubbing liquid flow meter is not installed and operated.

e. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

i. the date and time of each recorded action;

ii. the scrubbing liquid flow rate for each scrubber once a week at a minimum

iii. the results of each inspection;

iv. the results of any maintenance performed on the wet scrubbers; and

v. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

f. The Permittee shall submit the results of any maintenance performed on the scrubbers within 30 days of a written request by the DAQ.

g. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for visible emissions from these sources.

3. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions when burning natural gas in these sources.

S. The following emergency engine:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESDP93	Process Water (Supply) Emergency Diesel fuel-fired Pump 526 (173 BHP)	NA	NA

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
toxic air pollutants	as defined in Section 2.2 C.1. ***State-enforceable only***	15A NCAC 2D .1100
toxic air pollutants	as defined in Section 2.2 C. 2. ***State-enforceable only***	15A NCAC 2Q .0711
hazardous air pollutants	Work practice and recordkeeping requirements.	15A NCAC 2D .1111 [40 CFR Part 63, Subpart ZZZZ]
Various	See Condition 2.1.S.1.	15A NCAC 2D .0524 **[**40 CFR 60, NSPS Subpart IIII]

1. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS

a. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart IIII, including Subpart A "General Provisions" for this source:

General Provisions [15A NCAC 2Q .0508(f)]

b. Pursuant to 40 CFR 60 .4218, The Permittee shall comply with the General Provisions of 40 CFR 60 Subpart A as presented in Table 8 of 40 CFR 60 Subpart IIII.

Emission Standards [15A NCAC 2Q .0508(f)]]

c. The Permittee shall comply with the emission standards for new non-road CI engines in 40CFR 60.4202, for all pollutants, for the same model year and maximum engine power for this source. [40CFR 60.4205(b)]

Fuel Requirements [15A NCAC 2Q .0508(f)]

d. The Permittee shall use diesel fuel in the engine with:

i. a maximum sulfur content of 15 ppm; and

ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

[40CFR 60.4207(b) and 40CFR 80.510(b)]

Testing [15A NCAC 2Q .0508(f)]]

e. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in conditions c. and d. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

Monitoring [15A NCAC 2Q .0508(f)]

f. The engine has the following monitoring requirements:

i. The engine shall be equipped with a non-resettable hour meter prior to startup. [40CFR 60.4209(a)]

ii. The engine, if equipped with a diesel particulate filter, must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40CFR

60.4209(b)]

Compliance Requirements [15A NCAC 2Q .0508(b)]

g. The Permittee shall:

i. operate and maintain the engine and control devices according to the manufacturer's emission related-written instructions over the entire life of the engine;

ii. change only those emission-related settings that are permitted by the manufacturer; and

iii. meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable.

[40CFR 60.4206 and 60.4211(a)]

h. The Permittee shall comply with the emission standards in condition c. by purchasing an engine certified to the emission standards in condition c. The engine shall be installed and configured according to the manufacturer's emission-related specifications. [40CFR 60.4211(c)]

i. Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine.

Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year.

Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

[40CFR 60.4211(f)]

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the requirements in conditions f. through i. are not met.

Recordkeeping [15A NCAC 2Q .0508(f)]

j. To assure compliance, the Permittee shall perform inspections and maintenance on the engine as recommended by the manufacturer per 40 CFR 60.4206 and 40 CFR 60.4211(a). The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

i. the date and time of each recorded action;

ii. the results of each inspection;

iii. the results of any maintenance performed on the engine;

iv. any variance from manufacturer's recommendations, if any, and corrections made;

v. the hours of operation during maintenance and readiness testing, emergency service and non-emergency service [40 CFR60.4214(b)];

vi. if a PM filter is used, records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached [40 CFR60.4214(c)]

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

k. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of

each calendar year for the preceding six-month period between January and June. All instances of noncompliance with the requirements of this permit shall be clearly identified.

2. 15A NCAC 2D .1111 MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.6585, 6590(a)(2)(ii)]

a. For this source (stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions) the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart ZZZZ, "National Emission Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions."

Stationary RICE subject to Regulations under 40 CFR Part 60 [15 A NCAC 2Q. 0508(f)]

b. Pursuant to 40 CFR 63.6590(c)(6), these sources must meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A by meeting the requirements of 40 CFR part 60 subpart IIII. No further requirements apply for this engine under 40 CFR 63 Subpart ZZZZ and Subpart A.

If the requirements in condition b. are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

T. The following source:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESVAP1 **MACT Subpart DDDDD**	Propane-fired propane vaporizer (4.2 million Btu per hour heat input rate)	NA	NA

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulates	0.324 pound per million Btu heat input	15A NCAC 2D .0503
sulfur dioxide	2.3 lbs/million Btu heat input	15A NCAC 2D .0516
visible emissions	20 percent opacity	15A NCAC 2D .0521
hazardous air pollutants	Best Combustion Practices - 5 year tune up, initial energy assessment	15A NCAC 2D .1111 *[MACT Subpart DDDDD]*

1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of propane that are discharged from this source into the atmosphere shall not exceed 0.324 pound per million Btu heat input [15A NCAC 2D .0503(a)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of propane in this

source.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of propane in this source.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 2Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of propane in this source.

4. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.7485, .7490(d), .7499(l)]

a. For this existing process heater designed to burn gas 1 fuels, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD . "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions."

Definitions and Nomenclature [40 CFR 63.7575]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions [40 CFR 63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Date [40 CFR 63.7495(b)]

d. The Permittee shall complete the initial tune up and the one-time energy assessment no later than January 31, 2016. [40 CFR 63.7495(b), 63.7510(e)]

Notifications [40 CFR 63.7545, 63.7530(d),(e),(f)]

e. The Permittee shall submit a Notification of Compliance Status. The notification shall contain the following:

i. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned.

ii. the following certification(s) of compliance, as applicable:

i.- "This facility complies with the required initial tune-up according to the procedures in condition g.i. through g.v. and m. ii.' (40 CFR 63.7540(a)(10)(i) through (vi)); and

ii.- "This facility has had an energy assessment performed according to condition k. (40 CFR 63.7530(e))."

The notification must be signed by a responsible official and sent before the close of business on the 60th day following the completion of the initial tune up and one time energy assessment (whichever is later).

General Compliance Requirements [40 CFR 63.7505(a), 63.7500(f)]

f. The Permittee shall be in compliance with the work practice standards in this subpart. These standards apply at all times the affected unit is operating.

Work Practice Standards [15A NCAC 02Q .0508(f)]

g. The Permittee shall conduct a tune-up of the process heater every five years as specified below.

i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months

ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown)'

iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject.

v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

[40CFR 63.7500(a), 63.7540(a)(10), (a)(12)]

h. Each annual tune-up shall be conducted no more than 13 months after the previous tune-up. [40CFR 63.7515(d)]

i. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

[40 CFR 63.7540(a)(13), 63.7515(g)]

j. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 CFR 63.7500(a)(3)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in f. through j. are not met.

Energy Assessment Requirements [15A NCAC 02Q .0508(b)]

k. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must include the following items:

i. A visual inspection of the boiler system;

ii. An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems,

operating and maintenance procedures, and unusual operating constraints;

iii. An inventory of major energy use systems consuming energy from affected boiler(s) and which are under control of the boiler owner or operator;

iv. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;

v. A list of major energy conservation measures that are within the facility's control;

vi. A list of the energy savings potential of the energy conservation measures identified; and

vii. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

l. The energy assessment will be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The vaporizer system(s) and any on-site energy use system(s) accounting for at least 50 percent of the affected source(s) energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour on-site energy assessment.

[40 CFR 63.7500(a)(1), Table 3]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in k. through l. are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f), 40 CFR 63.7555]

m. The Permittee shall keep the following:

i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).

[40 CFR 63.7555(a)(1)]

ii. Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:

(A) The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the source;

(B) A description of any corrective actions taken as a part of the combustion adjustment; and

(C) The type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

[40 CFR 63.7540(a)(10)(vi)]

iii. The associated records for conditions f. through l. including:

(A) the occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment.

[40 CFR 63.10(b)(2)(ii)]

iv. maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

[40 CFR 63.7555(i)]

v. maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

[40 CFR 63.7555(j)]

n. The Permittee shall:

i. maintain records in a form suitable and readily available for expeditious review;

ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and

iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

[40 CFR 63.7560, 63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained per conditions m. through n.

Reporting Requirements [15A NCAC 02Q .0508(f)]

o. The Permittee shall submit compliance reports to the DAQ on a 5-year basis. The first report shall cover the period beginning on the compliance date specified in condition d. and ending on the earliest December 31st following a complete 5-year period. Subsequent 5-year reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 31.

40 CFR 63.7550(a), (b)

i. This report must also be submitted electronically through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due the report the Permittee submit the report to the at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.7550(h)(3)]

p. The compliance report must contain the following information:

i. Company name and address;

ii. Process unit information, emissions limitations, and operating parameter limitations;

iii. Date of report and beginning and ending dates of the reporting period;

iv. The total operating time during the reporting period;

iv. If there are no deviations from the requirements of the work practice requirements in condition g. above, a statement that there were no deviations from the work practice standards during the reporting period; and

v. Include the date of the most recent tune-up for each unit required according to condition g. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown.

[40 CFR 63.7550(a) and (c), Table 9]

q. If you have a deviation from a work practice standard during the reporting period, the report must contain the following information:

i. A description of the deviation and which emission limit or operating limit from which you deviated; and

ii. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

[40 CFR 63.7550(a) and (d), 63.7540(b), Table 9]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the reporting requirements in o. through q. are not met.

2.2 - Multiple Emission Source(s) Specific Limitations and Conditions

A. The following sources:

Table 2.2.A.

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESB83A	One natural gas/No. 2 fuel oil fired boiler (25.1 million Btu per hour nominal heat input rate)	NA	NA
ESB83B	One natural gas/No. 2 fuel oil fired boiler (16.33 million Btu per hour nominal heat input rate)	NA	NA
ES-1 through, ES-5, ES-7 through ES-11 ES-17 through ES-18	Twelve natural gas-fired fiberglass drying ovens (3.4 million Btu per hour maximum heat input, each)	NA	NA
ES-6, ES-12 ES-19 through ES-21	Five natural gas-fired fiberglass drying ovens (1.5 million Btu per hour maximum heat input, each)	NA	NA
ES-14a, ES-14b, ES-14c, ES-15a, ES-15b, ES-15c,	Six natural gas-fired fiberglass drying ovens (0.92 million Btu per hour maximum heat input, each)	NA	NA

1. 15A NCAC 2D .1109: CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters

a. The Permittee shall use best combustion practices when operating the affected boilers and process heaters in Table 2.2.A above. The initial compliance date for this work practice standard and the associated monitoring, recordkeeping, and reporting requirements is **April 27, 2013.** These conditions need not be included on the annual compliance certification until after the initial compliance date.
   i. The Permittee shall comply with this CAA §112(j) standard until May 19, 2019. The initial compliance date for the applicable CAA §112(d) standard for ‘‘National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters” is May 20, 2019, as specified in the specific conditions in Section 2.1. above.

Monitoring/Recordkeeping

b. To assure compliance, the Permittee shall perform an annual boiler or process heater inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
   i. Inspect the burner, and clean or replace any components of the burner as necessary;
   ii. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and,
   iii. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly.

   The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if the affected boilers are not inspected and maintained as required above.

c. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date of each recorded action;
   ii. The results of each inspection; and,
   iii. The results of any maintenance performed on the boilers and process heaters.
   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

d. No reporting is required for hazardous air pollutants from the firing of natural gas in all the above sources and No. 2 fuel oil in the boilers.

B. Facility-wide

The following table provides a summary of limits and standards for the emission sources described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
volatile organic compounds	Work Practice Standards	15A NCAC 2D .0958

1. 15A NCAC 2D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

a. Pursuant to 15A NCAC 2D .0958, for all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions; the Permittee shall:
   i. store all material, including waste material, containing volatile organic compounds in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
   ii. clean up spills of volatile organic compounds as soon as possible following proper safety procedures,
   iii. store wipe rags containing volatile organic compounds in closed containers,
   iv. not clean sponges, fabric, wood, paper products, and other absorbent materials with volatile organic compounds,
   v. transfer solvents containing volatile organic compounds used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act,
   vi. clean mixing, blending, and manufacturing vats and containers containing volatile organic compounds by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act. [15A NCAC 2D .0958(c)]

b. When cleaning parts with a solvent containing a volatile organic compound, the Permittee shall:
   i. flush parts in the freeboard area,
   ii. take precautions to reduce the pooling of solvent on and in the parts,
   iii. tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
   iv. not fill cleaning machines above the fill line,
   v. not agitate solvent to the point of causing splashing. [15A NCAC 2D .0958(d)]

Monitoring [15A NCAC 2Q .0508(f)]

c. To assure compliance with paragraphs (a) and (b) above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing volatile organic compounds. The inspections shall be conducted during normal operations. If the required inspections are not conducted the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Recordkeeping [15A NCAC 2Q .0508(f)]

d. The results of the inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each inspection; and
   ii. the results of each inspection noting whether or not noncompliant conditions were observed.
   If the required records are not maintained the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

C. Facility-wide

The following table provides a summary of limits and standards for the emission sources described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
toxic air pollutants	Acceptable Ambient Levels **State Enforceable Only**	15A NCAC 2D .1100
toxic air pollutants	Toxic Pollutant Exemption Rates **State Enforceable Only**	15A NCAC 2Q .0711
odors	Odorous emissions must be controlled. **State Enforceable Only**	15A NCAC 2D .1806

State Enforceable Only

1. TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REQUIREMENT

a. Pursuant to 15A NCAC 2D .1100 and in accordance with the air toxic compliance demonstration approved on September 6, 2012, the following permit limits in Table1, in units of pounds per hour, shall not be exceeded:

Table 1.

Permit ID No.	Stack ID No	Stack Description	Acetic acid	Ammonia	Arsenic	Benzene	Beryllium	Cadmium	Chromium	Ethylene Oxide	Fluoride	Formaldehyde	Manganese
520M	EPM9	Furnace 520 melter	NA	NA	1.91E-05	2.58E-02	1.15E-03	1.46E-03	2.43E-02	NA	2.74E+00	9.23E-01	9.90E-01
520R/F	EPVENT	Robison Ventilator (vents Furnace 520 ref/fhs)	NA	NA	6.20E-06	8.39E-03	3.72E-04	4.76E-04	7.89E-03	NA	3.05E-01	3.00E-01	3.21E-01
524M	EPEC9	Furnace 524 melter	NA	NA	2.67E-05	3.61E-02	1.60E-03	2.05E-03	3.40E-02	NA	5.44E+00	1.29E+00	1.38E+00
524R	EPR10	Furnace 524 Refiner #1 stack	NA	NA	1.67E-06	2.26E-03	1.00E-04	1.28E-04	2.13E-03	NA	3.02E-01	8.08E-02	8.67E-02
524F	EPF12	Furnace 524 Forehearth #1 stack	NA	NA	1.67E-06	2.26E-03	1.00E-04	1.28E-04	2.13E-03	NA	7.56E-02	8.08E-02	8.67E-02
524F	EPF13	Furnace 524 Forehearth #2 stack	NA	NA	1.67E-06	2.26E-03	1.00E-04	1.28E-04	2.13E-03	NA	7.56E-02	8.08E-02	8.67E-02
524F	EPF14	Furnace 524 Forehearth #3 stack	NA	NA	1.67E-06	2.26E-03	1.00E-04	1.28E-04	2.13E-03	NA	7.56E-02	8.08E-02	8.67E-02
524F	EPF15	Furnace 524 Forehearth #4 stack	NA	NA	1.67E-06	2.26E-03	1.00E-04	1.28E-04	2.13E-03	NA	7.56E-02	8.08E-02	8.67E-02
525M	EPM16	Furnace 525 melter	NA	NA	2.27E-05	3.07E-02	1.36E-03	1.74E-03	2.89E-02	NA	4.63E+00	1.10E+00	1.18E+00
525R	EPR16	Furnace 525 Refiner stack #1	NA	NA	1.02E-06	1.38E-03	6.10E-05	7.80E-05	1.29E-03	NA	8.57E-02	4.91E-02	5.27E-02
525R	EPR18	Furnace 525 Refiner stack #2	NA	NA	1.02E-06	1.38E-03	6.10E-05	7.80E-05	1.29E-03	NA	8.57E-02	4.91E-02	5.27E-02
525R	EPR19	Furnace 525 Refiner stack #3	NA	NA	1.02E-06	1.38E-03	6.10E-05	7.80E-05	1.29E-03	NA	8.57E-02	4.91E-02	5.27E-02
525F	EPF20	Furnace 525 Forehearth stack #1	NA	NA	1.02E-06	1.38E-03	6.10E-05	7.80E-05	1.29E-03	NA	6.43E-02	4.91E-02	5.27E-02
525F	EPF21	Furnace 525 Forehearth stack #2	NA	NA	1.02E-06	1.38E-03	6.10E-05	7.80E-05	1.29E-03	NA	6.43E-02	4.91E-02	5.27E-02
525F	EPF22	Furnace 525 Forehearth stack #3	NA	NA	1.02E-06	1.38E-03	6.10E-05	7.80E-05	1.29E-03	NA	6.43E-02	4.91E-02	5.27E-02
525F	EPF23	Furnace 525 Forehearth stack #4	NA	NA	1.02E-06	1.38E-03	6.10E-05	7.80E-05	1.29E-03	NA	6.43E-02	4.91E-02	5.27E-02
526M	EPM24	Furnace 526 melter	NA	NA	3.87E-05	5.24E-02	2.32E-03	2.97E-03	4.93E-02	NA	5.85E+00	1.87E+00	2.01E+00
526R	EPR25	Furnace 526 Refiner stack #2	NA	NA	1.03E-06	1.39E-03	6.19E-05	7.91E-05	1.31E-03	NA	1.08E-01	4.98E-02	5.34E-02
526R	EPR26	Furnace 526 Refiner stack #3	NA	NA	1.03E-06	1.39E-03	6.19E-05	7.91E-05	1.31E-03	NA	1.08E-01	4.98E-02	5.34E-02
526R	EPR27	Furnace 526 Refiner stack #6	NA	NA	1.03E-06	1.39E-03	6.19E-05	7.91E-05	1.31E-03	NA	1.08E-01	4.98E-02	5.34E-02
526F	EPF28	Furnace 526 Forehearth stack #7	NA	NA	1.03E-06	1.39E-03	6.19E-05	7.91E-05	1.31E-03	NA	5.42E-02	4.98E-02	5.34E-02
526F	EPF29	Furnace 526 Forehearth stack #8	NA	NA	1.03E-06	1.39E-03	6.19E-05	7.91E-05	1.31E-03	NA	5.42E-02	4.98E-02	5.34E-02

Permit ID No.	Stack ID No	Stack Description	Acetic acid	Ammonia	Arsenic	Benzene	Beryllium	Cadmium	Chromium	Ethylene Oxide	Fluoride	Formaldehyde	Manganese
526F	EPF30	Furnace 526 Forehearth stack #9	NA	NA	1.03E-06	1.39E-03	6.19E-05	7.91E-05	1.31E-03	NA	5.42E-02	4.98E-02	5.34E-02
526F	EPF31	Furnace 526 Forehearth stack #10	NA	NA	1.03E-06	1.39E-03	6.19E-05	7.91E-05	1.31E-03	NA	5.42E-02	4.98E-02	5.34E-02
526F	EPF32	Furnace 526 Forehearth stack #11	NA	NA	1.03E-06	1.39E-03	6.19E-05	7.91E-05	1.31E-03	NA	5.42E-02	4.98E-02	5.34E-02
526F	EPF33	Furnace 526 Forehearth stack #12	NA	NA	1.03E-06	1.39E-03	6.19E-05	7.91E-05	1.31E-03	NA	5.42E-02	4.98E-02	5.34E-02
ESB83A	EPB83a	Boiler #3	NA	NA	4.85E-06	5.10E-05	2.91E-07	2.67E-05	3.40E-05	NA	NA	8.88E-03	8.30E-01
ESB83B	EPB83b	Boiler #4	NA	NA	4.85E-06	5.10E-05	2.91E-07	2.67E-05	3.40E-05	NA	NA	8.88E-03	8.30E-01
	EPB83c	***20 HP Boiler***	NA	NA		***1.71E-06***				NA	NA	***6.12E-05***	
ESDG85	EPDG85	Diesel generator #2, B/R	NA	NA	3.36E-05	6.52E-03	2.52E-05	2.52E-05	2.52E-05	NA	NA	6.63E-04	5.04E-05
ESDG86	EPDG86	Diesel generator #3, B/R	NA	NA	3.36E-05	6.52E-03	2.52E-05	2.52E-05	2.52E-05	NA	NA	6.63E-04	5.04E-05
ESDG88A	EPDG88A	Diesel generator #4, Furnace 525	NA	NA	5.04E-05	9.78E-03	3.78E-05	3.78E-05	3.78E-05	NA	NA	9.94E-04	7.56E-05
ESDG88B	EPDG88B	Diesel generator #5, Furnace 526	NA	NA	5.04E-05	9.78E-03	3.78E-05	3.78E-05	3.78E-05	NA	NA	9.94E-04	7.56E-05
ESDP366	ESDP366	Diesel pump 524 PW Return	NA	NA	3.22E-06	7.51E-04	2.42E-06	2.42E-06	2.42E-06	NA	NA	9.50E-04	4.83E-06
I-ESDP89	EPDP89	Diesel pump 524 PW Supply	NA	NA	9.10E-06	2.12E-03	6.83E-06	6.83E-06	6.83E-06	NA	NA	2.68E-03	1.37E-05
I-ESDP90	EPDP90	Diesel pump, 525 PW Supply	NA	NA	6.72E-06	1.57E-03	5.04E-06	5.04E-06	5.04E-06	NA	NA	1.98E-03	1.01E-05
I-ESDP91	EPDP91	Diesel pump, 525 PW Return	NA	NA	3.22E-06	7.51E-04	2.42E-06	2.42E-06	2.42E-06	NA	NA	9.50E-04	4.83E-06
I-ESDP92	EPDP92	Diesel pump Loop 1&2 S	NA	NA	7.00E-06	1.63E-03	5.25E-06	5.25E-06	5.25E-06	NA	NA	2.07E-03	1.05E-05
I-ESDP93	EPDP93	Diesel pump, 526 PW supply	NA	NA	3.50E-06	8.16E-04	2.63E-06	2.63E-06	2.63E-06	NA	NA	1.03E-03	5.25E-06
I-ESDP94	EPDP94	Diesel pump, 526 PW Return	NA	NA	3.50E-06	8.16E-04	2.63E-06	2.63E-06	2.63E-06	NA	NA	1.03E-03	5.25E-06
ES-1	ES-01	Drying oven #1	1.28	8.95E-01	2.14E-06	2.89E-03	1.28E-04	1.64E-04	2.72E-03	4.87E-04	NA	1.03E-01	1.11E-01
ES-2	ES-02	Drying oven #2	1.28	8.95E-01	2.14E-06	2.89E-03	1.28E-04	1.64E-04	2.72E-03	4.87E-04	NA	1.03E-01	1.11E-01
ES-3	ES-03	Drying oven #3	1.28	8.95E-01	2.14E-06	2.89E-03	1.28E-04	1.64E-04	2.72E-03	4.87E-04	NA	1.03E-01	1.11E-01
ES-4	ES-04	Drying oven #4	1.28	8.95E-01	2.14E-06	2.89E-03	1.28E-04	1.64E-04	2.72E-03	4.87E-04	NA	1.03E-01	1.11E-01
ES-5	ES-05	Drying oven #5	1.28	8.95E-01	2.14E-06	2.89E-03	1.28E-04	1.64E-04	2.72E-03	4.87E-04	NA	1.03E-01	1.11E-01
ES-6	ES-06a	Drying oven #6a	1.28	8.95E-01	3.14E-07	4.25E-04	1.89E-05	2.41E-05	4.00E-04	4.87E-04	NA	1.52E-02	1.63E-02
ES-6	ES-06b	Drying oven #6b	1.28	8.95E-01	3.14E-07	4.25E-04	1.89E-05	2.41E-05	4.00E-04	4.87E-04	NA	1.52E-02	1.63E-02
ES-6	ES-06c	Drying oven #6c	1.28	8.95E-01	3.14E-07	4.25E-04	1.89E-05	2.41E-05	4.00E-04	4.87E-04	NA	1.52E-02	1.63E-02

Permit ID No.	Stack ID No	Stack Description	Acetic acid	Ammonia	Arsenic	Benzene	Beryllium	Cadmium	Chromium	Ethylene Oxide	Fluoride	Formaldehyde	Manganese
ES-7	ES-07	Drying oven #7	1.28	8.95E-01	2.14E-06	2.89E-03	1.28E-04	1.64E-04	2.72E-03	4.87E-04	NA	1.03E-01	1.11E-01
ES-8	ES-08	Drying oven #8	1.28	8.95E-01	2.14E-06	2.89E-03	1.28E-04	1.64E-04	2.72E-03	4.87E-04	NA	1.03E-01	1.11E-01
ES-9	ES-09	Drying oven #9	1.28	8.95E-01	2.14E-06	2.89E-03	1.28E-04	1.64E-04	2.72E-03	4.87E-04	NA	1.03E-01	1.11E-01
ES-10	ES-10	Drying oven #10	1.28	8.95E-01	2.14E-06	2.89E-03	1.28E-04	1.64E-04	2.72E-03	4.87E-04	NA	1.03E-01	1.11E-01
ES-11	ES-11	Drying oven #11	1.28	8.95E-01	2.14E-06	2.89E-03	1.28E-04	1.64E-04	2.72E-03	4.87E-04	NA	1.03E-01	1.11E-01
ES-12	ES-12a	Drying oven #12	1.28	8.95E-01	1.89E-07	2.55E-04	1.13E-05	1.45E-05	2.40E-04	4.87E-04	NA	9.11E-03	9.77E-03
ES-12	ES-12b	Drying oven #12	1.28	8.95E-01	1.89E-07	2.55E-04	1.13E-05	1.45E-05	2.40E-04	4.87E-04	NA	9.11E-03	9.77E-03
ES-12	ES-12c	Drying oven #12	1.28	8.95E-01	1.89E-07	2.55E-04	1.13E-05	1.45E-05	2.40E-04	4.87E-04	NA	9.11E-03	9.77E-03
ES-12	ES-12d	Drying oven #12	1.28	8.95E-01	1.89E-07	2.55E-04	1.13E-05	1.45E-05	2.40E-04	4.87E-04	NA	9.11E-03	9.77E-03
ES-12	ES-12e	Drying oven #12	1.28	8.95E-01	1.89E-07	2.55E-04	1.13E-05	1.45E-05	2.40E-04	4.87E-04	NA	9.11E-03	9.77E-03
ES-14a	ES-14a	Drying oven #14a	1.28	8.95E-01	5.78E-07	7.82E-04	3.47E-05	4.43E-05	7.36E-04	4.87E-04	NA	2.79E-02	3.00E-02
ES-14b	ES-14b	Drying oven #14b	1.28	8.95E-01	5.78E-07	7.82E-04	3.47E-05	4.43E-05	7.36E-04	4.87E-04	NA	2.79E-02	3.00E-02
ES-14c	ES-14c	Drying oven #14c	1.28	8.95E-01	5.78E-07	7.82E-04	3.47E-05	4.43E-05	7.36E-04	4.87E-04	NA	2.79E-02	3.00E-02
ES-15a	ES-15a	Drying oven #15a	1.28	8.95E-01	5.78E-07	7.82E-04	3.47E-05	4.43E-05	7.36E-04	4.87E-04	NA	2.79E-02	3.00E-02
ES-15b	ES-15b	Drying oven #15b	1.28	8.95E-01	5.78E-07	7.82E-04	3.47E-05	4.43E-05	7.36E-04	4.87E-04	NA	2.79E-02	3.00E-02
ES-15c	ES-15c	Drying oven #15c	1.28	8.95E-01	5.78E-07	7.82E-04	3.47E-05	4.43E-05	7.36E-04	4.87E-04	NA	2.79E-02	3.00E-02
ES-17	ES-17	Drying oven #17	1.28	8.95E-01	2.14E-06	2.89E-03	1.28E-04	1.64E-04	2.72E-03	4.87E-04	NA	1.03E-01	1.11E-01
ES-18	ES-18	Drying oven #18	1.28	8.95E-01	2.14E-06	2.89E-03	1.28E-04	1.64E-04	2.72E-03	4.87E-04	NA	1.03E-01	1.11E-01
ES-19	ES-19a	Drying oven #19	1.28	8.95E-01	3.14E-07	4.25E-04	1.89E-05	2.41E-05	4.00E-04	4.87E-04	NA	1.52E-02	1.63E-02
ES-19	ES-19b	Drying oven #19	1.28	8.95E-01	3.14E-07	4.25E-04	1.89E-05	2.41E-05	4.00E-04	4.87E-04	NA	1.52E-02	1.63E-02
ES-19	ES-19c	Drying oven #19	1.28	8.95E-01	3.14E-07	4.25E-04	1.89E-05	2.41E-05	4.00E-04	4.87E-04	NA	1.52E-02	1.63E-02
ES-20	ES-20a	Drying oven #20	1.28	8.95E-01	1.89E-07	2.55E-04	1.13E-05	1.45E-05	2.40E-04	4.87E-04	NA	9.11E-03	9.77E-03
ES-20	ES-20b	Drying oven #20	1.28	8.95E-01	1.89E-07	2.55E-04	1.13E-05	1.45E-05	2.40E-04	4.87E-04	NA	9.11E-03	9.77E-03
ES-20	ES-20c	Drying oven #20	1.28	8.95E-01	1.89E-07	2.55E-04	1.13E-05	1.45E-05	2.40E-04	4.87E-04	NA	9.11E-03	9.77E-03
ES-20	ES-20d	Drying oven #20	1.28	8.95E-01	1.89E-07	2.55E-04	1.13E-05	1.45E-05	2.40E-04	4.87E-04	NA	9.11E-03	9.77E-03
ES-20	ES-20e	Drying oven #20	1.28	8.95E-01	1.89E-07	2.55E-04	1.13E-05	1.45E-05	2.40E-04	4.87E-04	NA	9.11E-03	9.77E-03
ES-21	ES-21a	Drying oven #21	1.28	8.95E-01	2.36E-07	3.19E-04	1.41E-05	1.81E-05	3.00E-04	4.87E-04	NA	1.14E-02	1.22E-02
ES-21	ES-21b	Drying oven #21	1.28	8.95E-01	2.36E-07	3.19E-04	1.41E-05	1.81E-05	3.00E-04	4.87E-04	NA	1.14E-02	1.22E-02
ES-21	ES-21c	Drying oven #21	1.28	8.95E-01	2.36E-07	3.19E-04	1.41E-05	1.81E-05	3.00E-04	4.87E-04	NA	1.14E-02	1.22E-02
ES-21	ES-21d	Drying oven #21	1.28	8.95E-01	2.36E-07	3.19E-04	1.41E-05	1.81E-05	3.00E-04	4.87E-04	NA	1.14E-02	1.22E-02
ES-D1	ES-D1	Dielectric oven #1	1.28	8.95E-01	NA	NA	NA	NA	NA	4.87E-04	NA	NA	NA
ES-D2	ES-D2	Dielectric oven #2	1.28	8.95E-01	NA	NA	NA	NA	NA	4.87E-04	NA	NA	NA
ES-D3	ES-D3	Dielectric oven #3	1.28	8.95E-01	NA	NA	NA	NA	NA	4.87E-04	NA	NA	NA

Permit ID No.	Stack ID No	Stack Description	Acetic acid	Ammonia	Arsenic	Benzene	Beryllium	Cadmium	Chromium	Ethylene Oxide	Fluoride	Formaldehyde	Manganese
ES-D4	ES-D4	Dielectric oven #4	1.28	8.95E-01	NA	NA	NA	NA	NA	4.87E-04	NA	NA	NA
ESWC/L367	EPWC367	RWC #1	7.39	5.17E+00	2.24E-06	3.03E-03	1.35E-04	1.72E-04	2.85E-03	2.81E-03	NA	1.08E-01	1.16E-01
ESWC/L368	EPWC368	RWC #2	7.39	5.17E+00	2.24E-06	3.03E-03	1.35E-04	1.72E-04	2.85E-03	2.81E-03	NA	1.08E-01	1.16E-01
ESWC/L369	EPWC369	RWC #3	7.39	5.17E+00	2.24E-06	3.03E-03	1.35E-04	1.72E-04	2.85E-03	2.81E-03	NA	1.08E-01	1.16E-01
ESWCL370	EPWC370	RWC #4	7.39	5.17E+00	2.24E-06	3.03E-03	1.35E-04	1.72E-04	2.85E-03	2.81E-03	NA	1.08E-01	1.16E-01
ESWCL371	EPWC371	RWC #5	7.39	5.17E+00	2.24E-06	3.03E-03	1.35E-04	1.72E-04	2.85E-03	2.81E-03	NA	1.08E-01	1.16E-01
ESWCL372	EPWC372	RWC #6	7.39	5.17E+00	2.24E-06	3.03E-03	1.35E-04	1.72E-04	2.85E-03	2.81E-03	NA	1.08E-01	1.16E-01
ES97	EPBR97	Binder Area Vent System	2.19	1.53E+00	NA	NA	NA	NA	NA	8.34E-04	NA	NA	NA
ES378	EP378	526 In-line Dryer	0.815	5.70E-01	1.28E-06	1.73E-03	7.69E-05	9.83E-05	1.63E-03	3.10E-04	NA	6.19E-02	6.64E-02
ES379	EP379	526 In-line Dryer	0.815	5.70E-01	1.28E-06	1.73E-03	7.69E-05	9.83E-05	1.63E-03	3.10E-04	NA	6.19E-02	6.64E-02
ES380	EP380	526 In-line Dryer	0.815	5.70E-01	1.28E-06	1.73E-03	7.69E-05	9.83E-05	1.63E-03	3.10E-04	NA	6.19E-02	6.64E-02
ES381	EP381	526 In-line Dryer	0.815	5.70E-01	9.61E-07	1.30E-03	5.77E-05	7.37E-05	1.22E-03	3.10E-04	NA	4.64E-02	4.98E-02
526MBSB #1	EP382	Furnace 526 FSBS #1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
526MBSB #2	EP383	Furnace 526 FSBS #2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Multiple	WWTP	Wastewater Treatment Process	4.66E-02	5.03E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA

Monitoring/Recordkeeping

b. The Permittee shall record, retain on site (in written or electronic format) and make available to an authorized representative upon request, records sufficient to show that the permitted emission rates above are not exceeded.

Reporting

c. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

State Enforceable Only

2. TOXIC AIR POLLUTANT EMISSIONS LIMITATION REQUIREMENT -Pursuant to 15A NCAC 2Q .0711, for each of the below listed toxic air pollutants (TAPs), the Permittee has made a demonstration that facility-wide actual emissions do not exceed the Toxic Permit Emission Rates (TPERS) listed in 15A NCAC 2Q .0711. The facility shall be operated and maintained in such a manner that emissions of any listed toxic air pollutant(s) from the facility, including fugitive emissions, will not exceed the toxic permit emission rate(s) (TPERs) specified in 15A NCAC 2Q .0711.

a. A permit to emit any of the below listed TAPs shall be required for this facility if actual emissions from all sources will become greater than the corresponding TPER.

b. PRIOR to exceeding any of these listed TPERs, the Permittee shall be responsible for obtaining a permit to emit TAPS and for demonstrating compliance with the requirements of 15A NCAC 2D.1100.

c. In accordance with the approved application, the Permittee shall maintain records of operational information demonstrating that the toxic air pollutant emissions do not exceed the TPER(s) as listed below:

TOXIC AIR POLLUTANT(S)	TPER(s)
acetaldehyde	6.8 lbs/hour
acrolein	0.02 lbs/hour
acrylonitrile	0.22 lb/hr, 0.4 lb/day
Benzyl Chloride	0.13 lb/hr
beryllium	0.28 lbs/year
chloroprene	0.89 lbs/hour, 9.2 lbs/day
1,4-dioxane	12 lb/day
Epichlorohydrin	5600 lb/yr
Ethylenediamine	0.64 lb/hr, 6.3 lb/day
hexavalent chromium	0.0056 lbs/year
hexane	23 lbs/day
Hexane isomers	92 lb/day
hydrogen chloride	0.18 lbs/hour
mercury	0.013 lbs/day
methyl ethyl ketone	22.4 lbs/hour, 78.0 lbs/day
soluble nickel compounds	0.013 lbs/day
phenol	0.24 lbs/hour
toluene	14.4 lbs/hour, 98.0 lbs/day
styrene	2.7 lbs/hour
xylene	16.4 lbs/hour, 57.0 lbs/day

State Enforceable Only

3. 15A NCAC 2D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

a. The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

D. The following sources:

Table 2.2.D.1.

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Double level fiberglass furnace No. 520, using only EFB* technology, consisting of the following:			
520M **NSPS**	natural gas / propane / direct oxygen fired melter)7,280 pounds glass per hour maximum allowable pull rate)	NA	NA
Double level fiberglass furnace No. 524, using only EFB* technology, consisting of the following:			
524M **NSPS**	natural gas / propane direct oxygen fired melter equipped with electric boost (1,950 kW capacity) (18,600 pounds glass per hour maximum allowable pull rate)	NA	NA
Double level fiberglass furnace No. 525, using only EFB* technology, consisting of the following:			
525M	natural gas / propane / direct oxygen fired melter (15,822 pounds glass per hour maximum allowable pull rate)	NA	NA
Double level fiberglass furnace No. 526, using only EFB* technology, consisting of the following:			
526M **NSPS**	natural gas / propane / direct oxygen fired melter with 2400 kW electric boost (20,000 pounds per hour maximum allowable glass pull rate)	NA	NA

State Enforceable Only

1. Pursuant to NCGS 143-215.108(c):
   a. As required by the Special Order of Consent (SOC) (2002-002), fluoride emissions from each furnace melter described in Table 2.2.D.1. shall be less than 0.45 pounds per ton (annual average) of glass pulled.

   Testing

   b. The Permittee shall conduct source testing on at least one melter stack within 180 days after the issuance of permit no. **T62**, unless an alternate date is approved by the DAQ. The results of this test may be used to represent emissions for the other furnace melters in Table 2.2.D.1. The testing shall be performed in accordance with General Condition JJ with the following additional requirements:
      i. the Permittee shall request preapproval of the testing protocol(s) and test plan prior to conducting the source test. The protocol and test plan shall be submitted at least 60 days before conducting the test. The request for preapproval shall also be submitted to the Permitting Section Chief to ensure the intent of the test program will be met.
      ii. EPA Method 13B shall be used in the determination of the total fluoride emissions;
      iii. the test plan shall include a sampling and analysis plan to determine the batch material's total fluoride content. The emissions testing shall occur on the same shipment of batch materials sampled. The sampling and analysis plan shall be representative of the plan to be used for ongoing parametric monitoring.

   Upon completion of the source test, a total batch fluoride content shall be correlated to the emission limit in condition a. above, assuming a linear relationship between the emissions test result and the total fluoride content of the batch used during the testing. Upon DAQ approval of the source test results and the correlated

batch fluoride content value, the value shall be used to assess compliance with the emission limit in condition a.

Operating Limitations

c. Fluoride emissions from the melter section of the furnaces listed in Table 2.2.D.1. shall be controlled by the use of environmentally friendly batch (EFB).

Monitoring/Recordkeeping

d. Upon completion and approval of the testing required in condition b. above, the Permittee shall determine the fluoride content of batch materials on an annual basis. The second analysis shall be conducted within 1 year of the initial source test and analysis. Subsequent analyses shall be conducted no longer than one calendar year from the prior analysis.

e. Based on the annual analysis described in d. above, the total batch fluoride content shall be determined for every batch recipe change (or at least monthly if no changes) on a pound per ton of glass pulled basis for each furnace. For purposes of compliance, the batch fluoride content shall not exceed on an annual average basis the batch fluoride value correlated to the fluoride emission limit as determined in condition b. above.

f. The Permittee shall make records of the correlated batch fluoride content value, the annual analysis, and each batch fluoride calculation available during any on-site visit or upon request by the DAQ.

Reporting

g. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall include:
   i. the correlated batch fluoride content value;
   ii. the total fluoride content in pounds per ton of glass pulled for each recipe used for the previous six months; and
   iii. the total fluoride content in pounds per ton of glass produced on an rolling 12-month average basis for each furnace.

SECTION 3 - GENERAL CONDITIONS (version 3.6 – 01/31/12)

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 2Q .0508(i)(16)]
1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 2D and 2Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 2Q .0507(k) and .0508(i)(9)(B)]
The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environment and Natural Resources upon request.

C. **Severability Clause** [15A NCAC 2Q .0508(i)(2)]
In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 2Q .0507(e) and 2Q .0508(i)(16)]
Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 2Q .0508(i)(2)]
The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action,

for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY
The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**
1. Administrative Permit Amendments [15A NCAC 2Q .0514]
   The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 2Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 2Q .0524 and 2Q .0505]
   The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 2Q.0524 and 2Q .0505.
3. Minor Permit Modifications [15A NCAC 2Q .0515]
   The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 2Q .0515.
4. Significant Permit Modifications [15A NCAC 2Q .0516]
   The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 2Q .0516.
5. Reopening for Cause [15A NCAC 2Q .0517]
   The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 2Q .0517.

H. **Changes Not Requiring Permit Modifications**
1. Reporting Requirements
   Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
   a. changes in the information submitted in the application;
   b. changes that modify equipment or processes; or
   c. changes in the quantity or quality of materials processed.

   If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 2Q .0523(a)]
   a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
   b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
      i. the changes are not a modification under Title I of the Federal Clean Air Act;
      ii. the changes do not cause the allowable emissions under the permit to be exceeded;
      iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
      iv. the Permittee shall attach the notice to the relevant permit.
   c. The written notification shall include:
      i. a description of the change;
      ii. the date on which the change will occur;
      iii. any change in emissions; and
      iv. any permit term or condition that is no longer applicable as a result of the change.
   d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 2Q .0523(b)]
   The Permittee may make changes in the operation or emissions without revising the permit if:
   a. the change affects only insignificant activities and the activities remain insignificant after the change; or

b. the change is not covered under any applicable requirement.

4. Emissions Trading [15A NCAC 2Q .0523(c)]
   To the extent that emissions trading is allowed under 15A NCAC 2D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 2Q .0523(c).

I.A. **Reporting Requirements for Excess Emissions and Permit Deviations**
[15A NCAC 2D .0535(f) and 2Q .0508(f)(2)]
"Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 2D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 2Q .0700. *(Note: Definitions of excess emissions under 2D .1110 and 2D .1111 shall apply where defined by rule.)*
"Deviations" - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 2D .0535 as follows:
   a. Pursuant to 15A NCAC 2D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
      i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
         - name and location of the facility;
         - nature and cause of the malfunction or breakdown;
         - time when the malfunction or breakdown is first observed;
         - expected duration; and
         - estimated rate of emissions;
      ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
      iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 2D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 2Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
   a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 2D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B. **Other Requirements under 15A NCAC 2D .0535**
The Permittee shall comply with all other applicable requirements contained in 15A NCAC 2D .0535, including 15A NCAC 2D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 2D .0535(c)(1) through (7).
2. 15A NCAC 2D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. **Emergency Provisions** [40 CFR 70.6(g)]
The Permittee shall be subject to the following provisions with respect to emergencies:
1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
   a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
   b. the permitted facility was at the time being properly operated;
   c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
   d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. **Permit Renewal** [15A NCAC 2Q .0508(e) and 2Q .0513(b)]
This 15A NCAC 2Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 2Q .0500 renewal application is submitted at least nine months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 2Q .0512(b)(1), this 15A NCAC 2Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 2Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 2Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 2Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 2Q .0508(i)(4)]
It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. **Duty to Provide Information (submittal of information)** [15A NCAC 2Q .0508(i)(9)]
1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 2Q .0507(f)]
The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 2Q .0508(f) and 2Q .0508 (l)]
The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring

information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 2Q .0508(n)]
The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification
shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:
1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 2Q .0520]
A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 2Q .0512]
1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
   a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
   b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
   c. the applicable requirements under Title IV; or
   d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 2Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 2Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 2Q .0519]
The Director may terminate, modify, or revoke and reissue this permit if:
1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 2Q .0503]
Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 2Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 2Q .0508(l) and NCGS 143-215.3(a)(2)]
1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
   a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
   b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
   c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
   d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

   Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.
2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 2Q .0508(i)(10)]
1. The Permittee shall pay all fees in accordance with 15A NCAC 2Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environment and Natural Resources. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 2Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 2Q .0207]
The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 2Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 2Q .0107 and 2Q. 0508(i)(9)]
Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 2Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 2Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 2Q .0100 and .0300]
A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 2Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 2Q .0505 and .0507]
The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 2Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History [**15A NCAC 2Q .0507(d)(4)]
The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 2Q .0501(e)]
1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain

such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.

2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 2Q .0508(h)]
If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1)** -
FEDERALLY-ENFORCEABLE ONLY
Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 2Q .0508(i)(1)]
This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. **Air Pollution Emergency Episode** [15A NCAC 2D .0300]
Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 2D .0300.

HH. **Registration of Air Pollution Sources** [15A NCAC 2D .0200]
The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 2D .0202(b).

II. **Ambient Air Quality Standards** [15A NCAC 2D .0501(c)]
In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 2D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 2Q .0508(i)(16)]
Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .0912, .1110, .1111, or .1415 of Subchapter 2D.

If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least 45 days before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least 15 days before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the

period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.

4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
   a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
      (1) Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
      (2) Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
      (3) Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
   b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 2D .2600 has precedence over all other tests.

KK. **Reopening for Cause** [15A NCAC 2Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
   a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
   b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
   c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
   d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 2Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 2Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 2Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. **Reporting Requirements for Non-Operating Equipment** [15A NCAC 2Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

MM. **Fugitive Dust Control Requirement** [15A NCAC 2D .0540] - STATE ENFORCEABLE ONLY

As required by 15A NCAC 2D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions

beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 2D .0540(f). "Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. **Specific Permit Modifications** [15A NCAC 2Q.0501 and .0523]

1. For modifications made pursuant to 15A NCAC 2Q .0501(c)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 2Q .0501(d)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 2Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth St., Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
   a. a description of the change at the facility;
   b. the date on which the change will occur;
   c. any change in emissions; and
   d. any permit term or condition that is no longer applicable as a result of the change.

   In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. **Third Party Participation and EPA Review** [15A NCAC 2Q .0521, .0522 and .0525(7)]

For permits modifications subject to 45-day review by the federal Environment Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 2Q .0518 begins at the end of the 45-day EPA review period.

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
DAQ	Division of Air Quality
DENR	Department of Environment and Natural Resources
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standard
OAH	Office of Administrative Hearings
PM	Particulate Matter
PM_{10}	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound